The MODERN HOSPITAL

Vol. VIII *May, 1917* No. 5

Copyright, 1917, by THE MODERN HOSPITAL PUBLISHING COMPANY, Inc.
Entered at the Post Office at St. Louis, Mo., as second-class matter.
For subscription price and order blank see advertising page 34.

MULFORD

FOR THE CONSERVATION OF LIFE

LABORATORIES

Hay Fever Vaccine, Spring

For the Prevention and Treatment of

Rose Colds or Spring Hay Fever

Hay Fever Vaccine Spring Mulford consists of the protein extract obtained from the pollens of timothy, rye, red-top and several other grasses—the cause of so-called rose-colds, or Spring or Summer hay fever—dissolved in physiological saline solution and accurately standardized.

The Vaccine may be used without preliminary diagnostic tests, Spring hay fever being caused mostly by the pollen from grasses.

Autumn Hay Fever is nearly always due to the pollen of ragweed.

If treatment does not give entire relief, skin tests may be made to discover possible hypersusceptibility to pollen not contained in the Vaccine.

Hay Fever Vaccine "Spring" is furnished in:

Packages containing 4 sterile glass syringes of graduated strengths, $5.00
In single syringes "D" strength, $1.50

Syringe	A	contains	0.0025	mg.	extract	of	the pollen protein
"	B	"	0.005	"	"	"	"
"	C	"	0.01	"	"	"	"
"	D	"	0.02	"	"	"	"

In ordering specify "Spring" or "Fall" as may be desired.

For Immunization and Treatment of Hay Fever, first dose (Syringe A) should be given at least 30 days before expected attack, followed by B, C and D at five-day intervals. Syringe D strength Hay Fever Vaccine should be used at weekly intervals during the entire period of accustomed attack or until immunity is established.

There are no contraindications to the therapeutic or prophylactic use of Hay Fever Vaccine Mulford so far as known. A small percentage of patients may be hypersensitive to the protein extracts, in which case the doses may be reduced.

Full literature will be mailed upon request.

H. K. MULFORD CO., Philadelphia, U. S. A.

Manufacturing and Biological Chemists

26504

THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. VIII *May, 1917* No. 5

AN URBAN COMMUNITY PLAN FOR HEALTH AND MEDICAL SERVICE*

The Social Need—Four Methods of Approach—Requirements—Types of Service—Expenses and Possible Income—A Work for Community Centers

By DONALD B. ARMSTRONG, M. D., Director of the Department of Social Welfare of the New York Association for Improving the Condition of the Poor†, and J. H. BERKOWITZ, Secretary of the Committee on Medical Community Centers, New York

A SOCIAL NEED

WORKERS in the social, health, and medical fields have long realized that, whereas the rich can buy expensive and efficient medical service and the poor are assured of comparatively adequate, if not luxurious, medical provision in public or semipublic medical dispensaries or hospitals, the better-paid wage-earners and the moderately salaried middle class are largely unprovided for. They are not willing to avail themselves of reasonably efficient free medical service and not able to afford professional specialty service.

Is there not some way to give medical care to this large group at what might be called a wholesale rate, and at the same time insure expert and adequately paid medical attention?

Coupled with the realization of the general medical needs of the community is the knowledge of the grossly inadequate public provision for the detection and treatment of diseases and defects among school children, the inefficient and unorganized dispensary service for adults, and the inadequate and disorientated system of hospital facilities for certain types of disease.

There are also the lost opportunities for preventive medical and health-building work in connection with the private and public dispensaries and hospitals, the public schools, and the community organizations allied with the schools.

The suggestion which we here present contemplates the provision of medical and health service on a community basis in cooperation with school groups. It is aimed to meet the health needs of the community through correlating a new type of medical service with existing community agencies. Before outlining this suggestion we would mention that our committee has reviewed a number of alternative or supplementary measures, notably the following:

FOUR WAYS OUT

1. The establishment of a paid dispensary in conjunction with an existing medical institution. This has been done, and with great success, by Dr. Michael M. Davis, director of the Boston Dispensary. More recently a venereal pay clinic has been opened at the Brooklyn Hospital; and at the Mt. Sinai Hospital, under Dr. S. S. Goldwater, a very extensive system of pay clinics has been projected.

2. The establishment of a diagnostic center, such as the one recently opened at the Massachusetts General Hospital in Boston, where private physicians may send their patients for expert laboratory and diagnostic service.

3. The establishment of a specialty center, for a long time recommended by Dr. S. H. Monell (editor of the *Doctor's Pocket*), whereby private physicians, through cooperation, could secure the advantages of extensive institutional equipment, both for diagnosis and treatment.

4. The establishment of a pay evening clinic, not in connection with an existing medical institution or other existing agency, but on an entirely

*Paper (somewhat condensed) read at the First National Conference on Community Centers in New York, and printed here by special arrangement. The suggestions made are the outcome of an investigation conducted during the preceding year by a committee composed of physicians and community workers of which Dr. Haven Emerson, commissioner of health of New York City, is chairman.

†Dr. Armstrong has since severed his connection with the Association for Improving the Condition of the Poor, and is at present executive officer of the Community Health and Tuberculosis Demonstration in Framingham, Mass.

independent basis, probably in a neighborhood inhabited largely by industrial workers.

Finally, we come to the plan for a community-center clinic, the details of which will now be considered.

FUNDAMENTAL REQUIREMENTS

1. The proposed clinic should take advantage of the existing community-center development and should be established on the community or school-group basis.

2. The project should be financed as a corporation, possibly by issuing the stock in its own neighborhood. The incorporation should, of course, apply to the institution and not to the physicians, for in New York State it is illegal for physicians to incorporate the practice of medicine.

3. An outstanding feature of the plan would be the holding of evening clinics. If possible, however, the same equipment should be used for a paid day service, particularly for the correction of the defects among school children.

4. Moderate fees should be charged, probably differing for new and old patients. If in the general medical service the physician employed received possibly $5 for two-hour clinic, and saw fifteen patients during this time, he might have five new patients paying 50 cents apiece ($2.50) and ten old patients paying 25 cents apiece ($2.50), and the service would meet the professional charge. An additional charge would have to be made in surgical service to meet the necessary expense of dressings; but where dental and eye-refraction work is done it might be expected that the returns would provide a sufficient profit to cover the deficit of the least remunerative services. The enterprise should develop toward self-support; but for the first two or three years those financing the project would have to meet a deficit, which ought to be less with each year.

5. The clinic should employ professional service of a superior type such as one finds in a high-grade college dispensary. All professional service should be paid.

6. While closely functioning with existing school activities, the clinic should probably be housed in nearby rented premises.

7. A home-nursing service would be essential from the standpoints both of medical treatment and of educational and preventive work. If a visiting nurse received a salary of $1,200 a year and worked 300 days in a year, making fifteen calls a day, her services would be paid for at 30 cents a call. A slight excess charge could be made to cover the cost of dressings, etc. In a small and dense area, a nurse might make more than fifteen visits a day; the charge per visit could be reduced accordingly.

SUPPLEMENTARY REQUIREMENTS

1. Efficient statistical recording. This measure should be recognized as a routine requirement. All existing medical institutions should, of course, be highly developed in the community-center clinic if the plant is to be utilized on a basis of 100-percent efficiency.

2. An adequate follow-up system by both cards and visits, to be carried out largely by the nurses.

3. General health-educational work should include, in addition to the issuing of popular literature, placards, and public lectures, the following important provisions: prenatal inspection and educational classes for expectant mothers; infants' consultation station, etc.

4. A self-supporting system of physical examination should be considered. It would further the educational work and would be a valuable factor in the control of the increasing degenerative diseases. It would stand between the free dispensary, on the one hand, and the comparatively expensive Life Extension Institute, on the other. Physical examination with urine-analysis, blood-pressure determination, etc., might be proved possible at a cost of not more than $2.

TYPES OF SERVICE

A complete curative and preventive institution would include:

1. General medicine.
2. Surgery.
3. Eye service.
4. Ear, nose, and throat work.
5. Pediatrics.
6. Dermatology.
7. Neurology.
8. Venereal diseases.
9. Gynecology.
10. Dental service.
11. Orthopedics.
12. Obstetrics.

Such a plan would provide complete laboratory facilities, including pathological and x-ray examinations, if required. It might always be economy, however, to make an arrangement with an existing x-ray laboratory.

A druggist, at least on a part-time basis, would probably be needed.

For patients requiring hospitalization, beds would have to be provided. Operative nose-and-throat work, for example, requires hospitalization.

What is above outlined should be viewed as an ultimate development. The initial experiment, designed to test the possibilities of self-support, might utilize staff and equipment for the following services:

1. General medical service.
2. Minor surgical service.
3. Eye-refraction service.

4. Dental service.
5. A minimum laboratory equipment.
6. Home-nurse and social service.
7. General education service, including the prenatal and infant consultation work.
8. Physical examination for adults.

BUDGET

The committee has so far not outlined completely the plans for incorporation or estimated the amount of business such an institution might do, or the probable financial returns. No definite figures have been established as to the charges which it would be reasonable to make. Considerable attention has been given, however, to the cost side of the problem, including professional services, equipment, and maintenance. With the object of soliciting suggestions and criticisms, these cost items might be outlined on a yearly basis as follows:

Medical director (part time) evening	$2,000.00
Executive secretary (part time)	1,500.00
Attending physician (part time)	1,200.00
Surgeon (part time)	1,200.00
Dentists (2, part time)	2,400.00
Oculists (2, part time)	2,400.00
Nurse-registrar (full time)	1,200.00
Nurses (2, full time)	2,400.00
Domestic (janitorial)	600.00
Total	$14,900.00
Rent	1,000.00
Light and fuel	600.00

EQUIPMENT

Minor surgical	$ 300.00
Dental	1,200.00
Eye refraction	250.00
General medical	250.00
Total	2,000.00
Supplies	1,000.00
Educational work, printing, etc	2,500.00
Office	500.00
Miscellaneous	500.00
Total	$23,000.00

Our committee understands that it is possible for community centers to earn revenues in excess of their expenditures through their recreational activities. Such funds might be used for meeting the excess of operating expenditures over receipts in the medical work, especially during the initial stages of the experiment.

Such a project should be operated after the manner of a private physician's office rather than that of the usual dispensary, for only in this way can be established that attitude of mind among the patrons essential to the success of the venture.

As a basis for thought, not as a final solution, this paper is offered. In the community center there exists a tremendous power built up largely on a recreational and esthetic basis, thus far almost entirely unutilized for community service. It is hoped that the community-center clinic plan may take advantage of this existing force and turn it back into the community for social benefit. Such a mobilization of community motives would seem to be a timely step in disease-prevention and health-conservation.

If ever there was a place where absentmindedness is dangerous to life and limb, to soul and body—that place is a hospital.

Why? Because its contents are so curiously assorted. People wander in there—the first because he has lost his money, and the next because he has lost his mind. The third needs a ham splint, the fourth needs a husband (who has deserted her). One wants a fortnight's outing, another wants false teeth and something to put between them. New caution with the cat (which gives ring-worm), new care with the cooking (which spoils digestion), new plaster jackets, and new plans of action—absolutely we can see no end to the variety of need that pours in through the hospital gates at nine and pours out again at noon with some sort of patch or plaster on it.

Presence of mind, presence of the whole resources of the best-trained intellect, we obviously need if we are to do anything for this miscellany when once it is sorted out. But the task is made ten times harder, ten times more of a Waterloo for the absentminded, by the fact that each need comes to us obscured under a blinding dust-storm of understatement, overstatement, misstatement, and omission. The poor folks have no idea what they need. They know that they are off the track—that's all.—Richard C. Cabot, "Social Service and the Art of Healing."

It is not definitely known just how the leprosy bacillus enters the body. It may be through wounds of the skin or the lining membrane of the nose and throat, and possibly it may be taken into the body with food. It is pretty definitely proven that no particular article of diet, such as fish, causes the disease. It has been thought that some insect may act as the agent which transfers the germs from sick people to well people. This is not proved. Whatever the exact mechanism in the transference of the leprosy bacillus, evidence shows that the disease is spread mainly by direct contact, and is most prevalent where people are dirty and overcrowded. There is no evidence that leprosy is hereditary. Experience has shown that segregation is the only practicable means of controlling the disease. A bill appropriating $250,000 for the purpose of establishing a national home for lepers passed the House of Representatives on May 4, 1916, and was passed by the Senate on January 25, 1917. This provides a national institution for the care and treatment of the unfortunates afflicted with this gruesome disease and solves the problem of preventing its spread in the United States. —Health News, U. S. Public Health Service.

Most of our human worries are simply excess baggage that we do not need to take along and which to carry costs us in bodily wear and tear ten times its value. It is a good plan to travel light and take things as easy as possible. Not that we should shirk either our work or our responsibilities; but we need not carry excess baggage—Kansas State Board of Health.

NEW CHILDREN'S BUILDING OF THE TUBERCULOSIS LEAGUE OF PITTSBURGH

All Types of Tuberculosis Cared for Under One Roof—Special Construction Problems Due to Hillside Site—Some Details of Arrangement—Novel Design for Porch Window

By WILLIAM CHARLES WHITE, M. D., A. E. STEWART, and PAUL F. SHUEY, Pittsburgh, Pa.

THE Tuberculosis League of Pittsburgh seven years ago outlined a plan for the economic management of health problems in large municipalities, which may be described as "a unit equipment for a unit of population." In accordance with this plan, it has just added to its group of buildings one for housing the work for children (Fig. 1).

The plot of ground on which the buildings of the organization are erected covers about ten acres (Fig. 2). This contains about four level acres fronting on a street car line and noisy school district. The rest of the property lying on its north side presents a rapid slope of about two hundred yards to the boulevard connecting the business with the residence section of the city. Building on this hillside is more or less difficult, but it presents a beautiful view characteristic of the Pittsburgh district. The Allegheny River appears in the distance, while in the near foreground the smoke from the steel mills covers the poor residence quarters and manufacturing plants of the Lawrenceville district. In the nearer foreground the Pennsylvania Railroad, with its smoking engines and trains, adds to the smoke cloud; and, nearer yet, adjoining the league property, is the broad, naked hillside, on which no building occurs. Stretching away beyond the river in the far distance are the hillsides of the Allegheny portion of the city of Pittsburgh—altogether a wide, peculiar, and ever-varying scene.

In the early days of the organization it was proposed to build upon the level part of the lot facing the street car line, and building was begun by erecting a small dispensary in this situation. Plans for further construction in this direction were prepared in accordance with the policy of the institution, to be carried out at a future date. Through the vision of Mr. Colbert A. McClure, however, the whole of the first scheme was abandoned and a new plan prepared by Messrs. Janssen and Abbott, utilizing the smoking but interesting view from the hillside as an asset not to be wasted in providing for patients who lie long months at idle rest.

With the development of the latter plan the interest of Mr. R. B. Mellon, of the board of trustees, was aroused, and all the ground between the original hospital property and Bigelow Boulevard was purchased from the Schenley estate. This boulevard, as stated above, forms the main thoroughfare between the business and the residential section of the city.

It is hoped that in the near future the Garden Club of the city will take up the work of beautifying this hillside in accordance with the pleasure which such societies gain from this type of work. It is hoped at some future time to use this slope for "rest halls" and paths for exercise for patients in the institution.

One of the chief functions of the Tuberculosis League is teaching undergraduate medical students and nurses; this made it necessary to house in this one building for children many different phases of work. It will take care of all types of tuberculosis in children—of lung, glands, bones, and meninges.

There is a ward with accessory rooms for fourteen girls on the ground floor; also a similar ward unit for boys on the floor above this. On the subbasement floor are an open-air school and toilet rooms, while its associated dining and serving rooms are on the floor above it. On this dining-room floor (Fig. 3) are an x-ray department and four isolation-rooms. On the ground floor with the girls' ward is a small complete department for operative work on cases requiring such services (Fig. 4). It will be seen that there is also a students' laboratory on the first floor. On the floor above the operating-room is an area which can be isolated in case of the development of infectious diseases, and which may be utilized for tuberculosis, provided no other infection is present in the institution. This isolation unit includes two wards and a bath-room (Fig. 5).

Among the architectural and engineering difficulties presented by building on the sloping hillside were, first, that the ground underlying it had been undermined for coal in the early days of the mining operations in this part of the state. For many years the institution drained its sewage into the abandoned coal mine, because it was impossible to get the city to provide a sewage-disposal channel.

When the first building was contemplated, careful drilling and an analysis of the foundation ground had to be made. There were, further, numerous drainage springs beneath the surface clay which overtopped the many feet of shale substance underlying it; in rainy seasons these

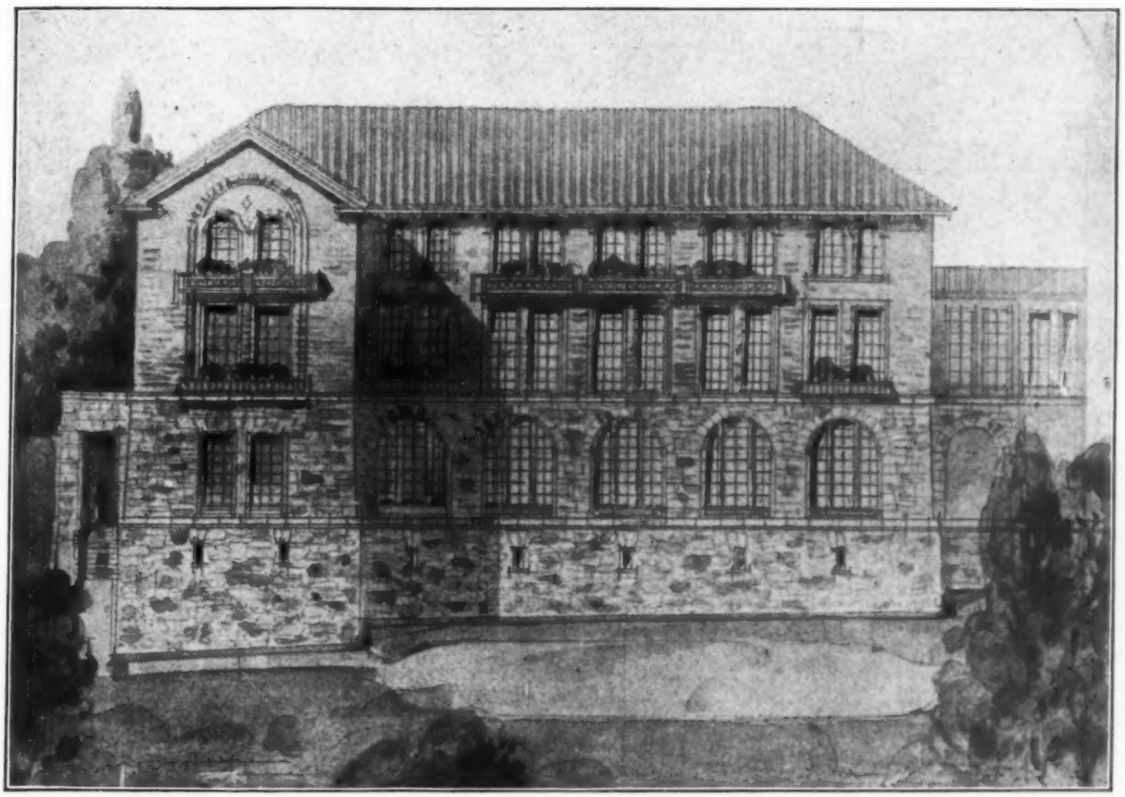


Fig. 1. New children's hospital building of the Tuberculosis League of Pittsburgh.

caused great slides of this clay around the building. It was found, from further experience in constructing the power and service building, which will be seen on the general plan, that it was necessary to put careful French draining not only around the building, but underneath it in lateral avenues, to protect the floors from general tendency to dampness, which came during the time of the heavy rains.

The long distance between the final site chosen

Fig. 2. Group of buildings belonging to the Tuberculosis League of Pittsburgh.

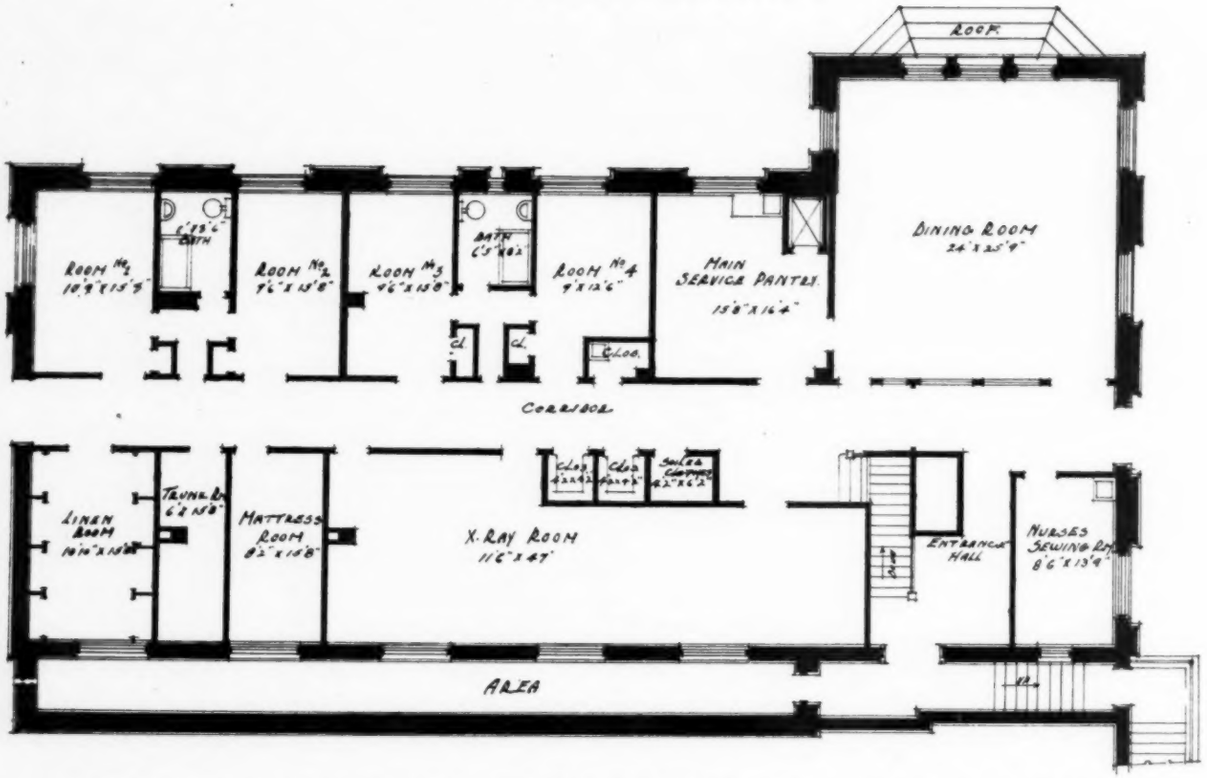


Fig. 3. Dining-room (basement) floor of the children's hospital building, with x-ray room and four isolation rooms.

for the building and the nearest sewer on the car-line street made sewage connection expensive. Finally the city was persuaded to build a new line through a projected street on the unpeopled hillside. Into this new sewer, which was built at considerable expense on account of the character of the ground and the blasting required, all the sewage of all the buildings of the institution was diverted from its former entrance into the coal mine cesspool.

The second most serious difficulty common to all buildings on hillsides was the procuring of light

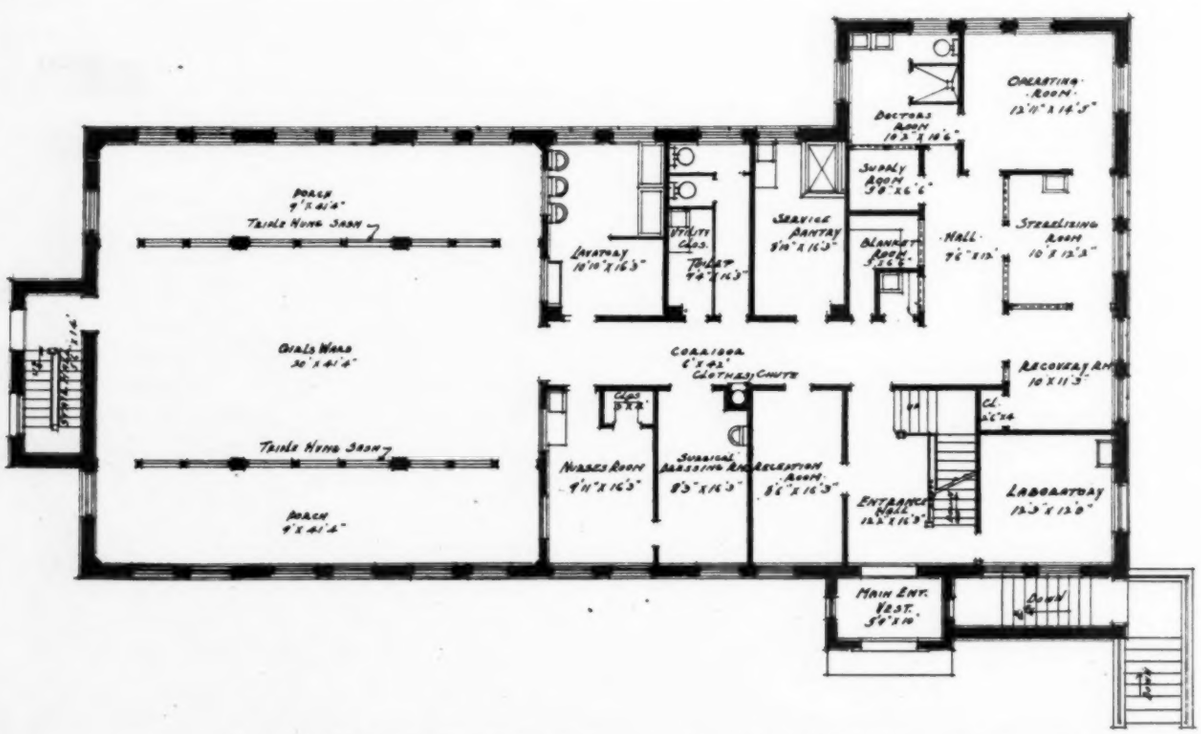


Fig. 4. First floor of the children's hospital building, containing a ward for girls and an operating department.

in the stories below the level where the slope began. Light was provided for by the areas shown in the detailed drawing of basement floor plan. These wide areas covered with grating are very satisfactory. They drain into the sewer from a cement base, and make, on account of their width, an easy method of cleaning the large windows opening on them.

Among the advantages gained by building on the hillside was that an extra floor was obtained with very little excavation on the north or lower side of the building. In this half of the building, which was really obtained in what would have been otherwise waste room, have been placed the open-air schoolroom, with its toilet-rooms, and a machinery-room. Within this portion of the

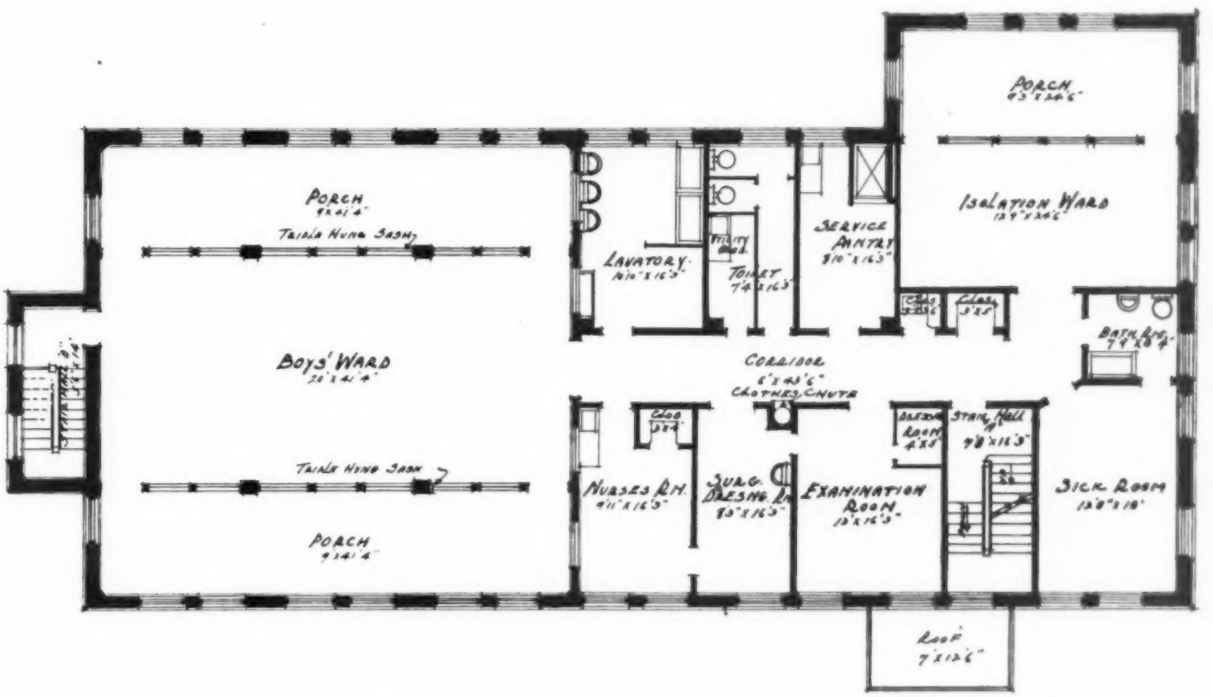


Fig. 5. Second floor of the children's hospital building, containing a ward for boys and an isolation unit.

building on its hillside there is nothing but the unexcavated shale, which would have been very expensive to remove.

Among the serious problems presented in every projected hospital is the lack of understanding, by those who have charge of the business and professional administration, of the technical knowledge required to appreciate the architectural engineering and building problems presented.

In putting up the first building of this group, it was found that without intention, but nevertheless surely, the architects, through their agents and builders, took great advantage of the ignorance of those who had the building work in charge for the league.

Perhaps nothing is so sad in institutional buildings as the failure to correlate the various factors entering the work. A hospital building is for the care of the sick. The fundamental thing in the actual care of the sick is the daily nursing and housekeeping work. Yet this fact is continuously forgotten and physicians and architects vie with each other, in the preparation of their drawings, in proposing theoretical arrangements for the construction on a plan often based upon what is done in other institutions they visit. It may safely be said the architect often knows nothing about the work involved in nursing and housekeeping, while the superintendent of nurses and the doctors know little about building; and often when the finished structure of these two groups has been passed through the hands of the builder all are unhappy in their endeavor to force on someone else fatherhood for the many mistakes.

In order to overcome the difficulty and such an unfortunate circumstance as occurred in the first draft of the plan for this building, in which a 6-foot porch was provided for a 6-foot bed, the services of a consulting architect were obtained to represent the organization. This architect, Mr. J. H. Giesey, added at once, by criticism of the plans, a number of valuable suggestions and gave his time freely to find out the desires of the institution by placing himself in the position of active administrator of the nurses' and general hospital work, which was to be carried on in the building, and intelligently to provide facilities which would have this work done with the least

amount of labor and trouble. Every article of furnishing and equipment was drawn in to scale: tables, beds, desks and cupboards, and water, steam, and gas lines were thus arranged before the building was begun.

New suggestions from frequent criticism of the plans often involved more money than was actually proposed to spend on the building, but at the same time, with the proof that the maintenance of the building during its years of usefulness would be much less in amount by the immediate expense, the permission for the expenditure was granted.

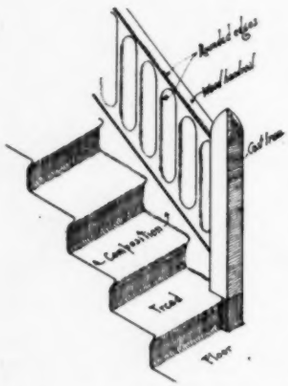


Fig. 6. Detail of stairs, showing composition tread, cast-iron newel post, wooden hand-rail, etc.

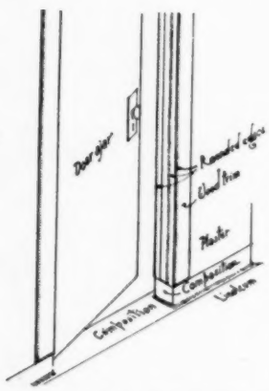


Fig. 7. Details of floor and door.

These suggestions included the utilizing of tile in the bathroom to a higher level and over more area than is usually adopted, and the extending of the floor material upward on all partitions and walls in lieu of baseboards and on all lower parts of the door trims. Wooden window sills were replaced with slate; floor colors and material were carefully chosen. The very best quality of material was used throughout the whole building. Much money was saved by having all steam, light, and water lines carried to scale, with the resulting absence of the useless turns so often found in carelessly constructed buildings.

Fig. 8. Transom porch windows.

The operation of such suggestions will be seen in the picture outlining the details of the stairs (Fig. 6) and the small sketch of the floor and door (Fig. 7).

While it is expensive in construction, we feel that we have at last arrived at the most valuable form of porch-window construction. From the hillside position of the hospital, great storms of wind, rain, and snow are of more or less frequent occurrence. Often the sick cannot rise to close their porches; often nurses and attendants are not available to close the windows quickly enough to save patient and bed and porch from wet. Through the suggestion of Mr. J. H. Giesey, an adaptation of the transom light was adopted; in this all the windows of the porch are fastened to one rod, working from a single controlling wheel which even a child can operate. The mechanism of this will be seen in Fig. 8. It has proved a very satisfactory solution of most of the difficulties connected with porch windows. There will be box screens within the windows, which can be easily removed for cleaning purposes.

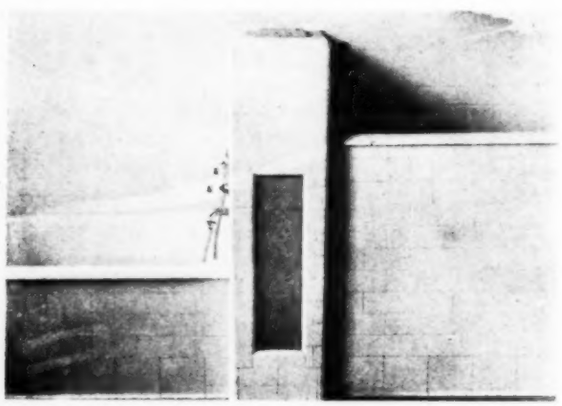


Fig. 9. High and low bathtubs.

The food service of the whole building is gathered in a single room on the basement floor and connects by a food elevator with serving-rooms on the two floors above. The food is prepared in the power and service building.

The lavatories and the rooms for food distribution and nurses' work have all been arranged, as will be seen on the floor plan, to make the nurse's steps as few as possible and to give her the advantage of the large windows, thus enabling her to oversee all the area under her charge.

All the work in the building will be done by graduate nurses. There will be a superintendent of the building and head nurse for each floor. Besides these, the members of the Post-Graduate

Training School will discharge the nursing duties of the building.

One bathtub in each room has been elevated. In this way small or very ill children may be easily bathed without the hardship on the nurse of bending to the lower tub. The older and stronger children will be able to manage their ablutions in the other tub placed beside the elevated one (Fig. 9).

Separate sinks for cleaning teeth and separate toilet-rooms for the sexes and a separate room for washing the bed-pans and other dishes used for infectious material are carefully provided by cutting the available space into small separate apartments. In this way it is hoped that the possibility of infection will be reduced to a minimum.

ICE CREAM—ITS COMPOSITION, MANUFACTURE, AND VALUE

Most Useful as Food in Health and Sickness—Vast Increase in Its Use—Fats or Cream the Expensive Ingredient—Evolution in Formulas—Some Staple Recipes

By JOHN PHILLIPS STREET, Chemist, Connecticut Agricultural Experiment Station, New Haven, Conn.

IT is within the memory of all of us when ice cream was considered as a luxury, when it was obtained usually only with some difficulty, and when its consumption was hailed as a family event, as a reward (especially to the child) for duties performed, and a fitting "end of a perfect day." In recent years the consumption of ice cream has increased enormously, probably ten times as much being eaten now as there was twelve years ago. It has now taken its position as a staple food, as an every-day commodity. It is dispensed at practically every soda fountain in the country; it is common enough and sufficiently inexpensive to be served as a dessert in even unpretentious boarding-houses; and even in the slums an alleged ice cream, "hokey-pokey," is sold by itinerant vendors at a cent a helping. In sickness, both in the home and in the hospital, it is recognized as a useful, refreshing, nutritious food. A conservative estimate places the annual consumption in the United States at 100,000,000 gallons, costing the consumer at least $150,000,000.

It is well worth while, therefore, to consider the nature of this popular product, to study its composition, to investigate its purity, quality, and wholesomeness, and to indicate methods for its preparation in the institution and the home.

There has been much controversy as to whether ice cream should be considered as a food or simply as a confection. The argument for its status as a confection is not wholly without merit, as its cooling and refreshing qualities very often encourage its consumption without any thought as to the nutriment it supplies. The confection argument, however, is supported mainly by the ice-cream manufacturers and those in their employ who wish to justify, if not to excuse, the use of low-quality cream, milk, or condensed milk (whole or skimmed) in their product, with a resulting decreased milk-fat content. Granting that at times ice cream is considered by the consumer chiefly as a confection, the fact remains that its food qualities are of great importance, and that, in certain cases at least, for instance in sickness or convalescence, it is supplied not simply because of its cooling and refreshing qualities, but also because it furnishes digestible, nutritious food in an attractive form. The fear of the manufacturer that he may supply a product too rich for the consumer's welfare is a trade chimera raised to justify a practice indulged in for purely commercial purposes. Likewise the claim that an ice cream rich in milk-fat could be produced only at a price which would be prohibitive to the ordinary consumer is not borne out by the facts. A few years ago I collected a large number of samples in a Connecticut city and found that ice creams ranging from 2 to 19 percent of milk-fat were sold at the uniform price of 40 cents per quart. If the manufacturer of the 19-percent ice cream found a satisfactory profit in selling his product at 40 cents, surely an inordinate profit must have come to the hokey-pokey manufacturer selling his 2-percent ice cream at the same price. The financial benefit coming from the reduced fat content was enjoyed only by the manufacturer, not by the consumer.

My experience with ice creams ranging from 2 to 19 percent of milk-fat has been paralleled many times by other investigators, especially in states and communities in which no established fat standard is maintained. McGill in Canada, for instance, found 395 samples ranging from 2.3 to 30.3 percent fat. The establishment of standards of composition for this very diverse product, therefore, seems to be necessary both to protect the manufacturer of high-grade ice cream from unfair competition with the low-grade article,

and to give the consumer a reasonable assurance as to the quality of the product offered to him.

The earliest attempts to make a standard for ice cream were based on the composition of cream itself, which in many sections of the country is required to contain at least 18 percent of fat to be of standard quality. The use of such a cream in plain ice cream made in the normal way without fillers or binders would give a resultant product containing something over 14 percent of fat. The present government standard, therefore, requires a minimum of 14 percent in plain ice cream, and 12 percent in ice creams into which nuts or fruits have been incorporated. This standard, however, has not been accepted by all of the states, standards ranging from 6 to 18 percent of fat being in force in different parts of the country. Such a diversity of standards is unfortunate, as it entails much hardship on the manufacturer doing an interstate business (this sort of trade constantly increasing), and at the same time leaving the consumer in uncertainty as to the quality of the product he is receiving. In my opinion a standard of 18 percent is much too high, and even the government standard might be liberalized without any detriment to the consumer. The ice-cream associations individually and through their counsel have foolishly opposed any fat standard for ice cream, but a recent decision of the United States Supreme Court in favor of such a standard should convince them that ice-cream standards have come to stay, and that a properly formulated standard will be the greatest boon honest ice cream has ever received.

COMPOSITION OF ICE CREAM

While ice cream as generally understood by the consumer is simply a frozen product made from cream and sugar, with or without natural flavoring, the development of modern ice-cream manufacture has shown a utilization of many other ingredients. Instead of full cream, milk, condensed milk, condensed skimmed milk, and homogenized fats have come into wide use; starch, flour, eggs, and rennet have been used as fillers; gelatin, gum tragacanth, and "ice-cream powders" as binders; and various sorts of fruits and flavors (both natural and artificial), various bakery products, and unfortunately coal-tar dyes are employed for the different kinds of frozen products grouped under the generic name of "ice cream."

Below will be found typical analyses of plain ice cream of the old style and of the modern type, the chief difference being that in the modern product either less rich cream is used, or milk or condensed milk is used in connection with a reduced amount of cream.

	Old Style.	Modern.
Water	62.95	66.80
Cane sugar	14.20	14.20
Milk sugar	4.80	5.00
Protein	3.00	3.85
Fat	14.50	9.40
Ash	0.55	0.75
Calories per 100 gm.	218.5	176.8

While believing that a fat standard is desirable for purposes of regulating the manufacture and sale of ice cream, I recognize that the value of the non-fatty ingredients must not be overlooked. The chief source of the protein is milk or cream, whose protein is a particularly valuable form of nitrogenous food, while the carbohydrates present in the form of cane and milk sugars are of high quality and of nutritive usefulness. The fact remains, however, that commercially the milk-fat in ice cream is the most valuable constituent and is certainly the most expensive, costing from 30 to 40 cents per pound as against 5 to 10 cents for the other chief ingredients.

The following tabulation shows the relative fuel value of old-style and modern ice cream compared with various animal food products, all expressed in calories per 100 gms.

Ice cream, old style	219	Butter	811
Ice cream, modern	177	Buttermilk	37
Sirloin steak	251	Cheddar cheese	477
Beef tongue	164	Cottage cheese	113
Lamb chops	370	Oleomargarine	783
Broiled chicken	112	Condensed milk	173
Codfish, fresh	72	Sweetened condensed milk	338
Halibut	126	Beef juice	26
Shad	167	Milk	72
Trout	100	Skimmed milk	38
Round clams	48	Cream	202
Oysters	52		
Eggs	160		

TYPES OF ICE CREAM

As noted above, many diverse ingredients are used in the manufacture of ice cream at the present time, and various trade terms have come into use to describe the resultant products. While there is much lack of uniformity in the use of these various names, the following classification suggested by Morentsen is quite satisfactory. Under the various headings are given recipes for typical varieties of each class to make 10 gallons of the finished product. These should prove useful to institutions, which, from the point of view of both economy and quality, might well make their own ice-cream. Furthermore, the dietitian in the hospital, recognizing the requirements and limitations of the patient, could so modify these recipes as to meet the individual's needs.

1. *Plain ice cream* is a frozen product made

from cream and sugar, with or without a natural flavoring.

Formula for vanilla ice cream:
5 gallons 25 percent cream.
8 pounds sugar.
4 ounces vanilla extract.

2. *Nut ice cream* is a frozen product made from cream and sugar and sound, non-rancid nuts.

Formula for walnut ice cream:
5 gallons 25 percent cream.
8 pounds sugar.
4 ounces vanilla extract.
4 pounds walnut meats.

3. *Fruit ice cream* is a frozen product made from cream, sugar, and sound, clean, mature fruits.

Formula for strawberry ice cream:
5 gallons 25 percent cream.
8 pounds sugar.
½ gallon crushed strawberries.

Formula for lemon ice cream:
5 gallons 25 percent cream.
10 pounds sugar.
2 pints lemon juice.
1 pint orange juice.

4. *Bisque ice cream* is a frozen product made from cream, sugar, and bread products, marshmallows, or other confection, with or without a natural flavoring.

Formula for macaroon bisque:
5 gallons 25 percent cream.
8 pounds sugar.
4 ounces vanilla extract.
5 pounds ground macaroons.

5. *Parfait* is a frozen product made from cream, sugar, and egg yolks, with or without nuts or fruits and other natural flavoring.

Formula for walnut parfait:
4 gallons 30 percent cream.
10 dozen egg yolks.
14 pounds sugar.
4 ounces vanilla extract.
4 pounds ground walnut meats.

6. *Mousse* is frozen whipped cream to which sugar and natural flavoring have been added.

Formula for cranberry mousse:
2 gallons 30 percent cream.
4 pounds sugar.
1 quart cranberry juice.
¼ pint lemon juice.

7. *Pudding* is a frozen product made from cream or milk, with sugar, eggs, nuts and fruits, highly flavored.

Formula for Nesselrode pudding:
3 gallons 30 percent cream.
10 dozen eggs.
10 pounds sugar.
4 ounces vanilla extract.
6 pounds candied fruits.
4 pounds raisins.
4 pounds walnut meats.
4 pounds filbert meats.

8. *Aufait* is a brick cream consisting of layers of one or more kinds of ice cream with solid layers of frozen fruits.

9. *Lacto* is a product manufactured from skimmed or whole sour milk, eggs, and sugar, with or without natural flavoring.

10. *Ices* are frozen products made from water or sweet skimmed or whole milk, and sugar, with or without eggs, fruit juices, or other natural flavoring.

(*a*). *Sherbet* is an ice cream made from water, sugar, egg albumin, and natural flavoring, and frozen to the consistency of ice cream.

Formula for lemon sherbet:
6 gallons water.
2 dozen egg whites.
24 pounds sugar.
6 pints lemon juice.
1½ pints orange juice.

(*b*). *Milk sherbet* is an ice made from sweet skimmed or whole milk, with egg albumin, sugar, and natural flavoring, and frozen to the consistency of ice cream.

Formula for pineapple sherbet:
6 gallons milk.
20 pounds sugar.
2 dozen egg whites.
1 gallon pineapple pulp.
1 quart lemon juice.

(*c*). *Frappe* is an ice consisting of water, sugar, and natural flavoring, and frozen to a soft semifrozen consistency. Formula the same as for sherbet except the egg whites.

(*d*). *Punch* is a sherbet flavored with liquor, or highly flavored with fruit juices and spice.

(*e*). *Souffle* is an ice cream made from water, eggs, sugar, and flavoring material. It differs from sherbet in that the whole egg is used.

Formula for pineapple souffle:
1½ gallons water.
4 dozen eggs.
12 pounds sugar.
1 gallon grated pineapple.
1 quart lemon juice.

FACTORS AFFECTING QUALITY

To insure good quality, not only must high-grade raw materials be used, but also the product must be kept free from contamination during its manufacture and its storage, and the whole process of manufacture must be carefully supervised in order to secure proper flavor, body, texture, and swell. In this paper it is possible only to refer in the briefest possible way to these factors, which, however, are of the greatest importance to the small or institutional manufacturer as well

as to the wholesale producer. Washburn has summarized these factors as follows:

Good flavor is influenced by the fat content of the cream, by freedom from contamination, by a low cream acidity, by the addition of minute amounts of salt, and by the ripening or aging of the ice cream. *Good body* is the result of plenty of fat (but not too much), of the aging and thorough cooling of the cream, and sometimes of the use of fillers. *Fine texture* is promoted by the richness of the cream, by proper freezing methods, by the aging of the cream, and, if the product is not to be used promptly, by the use of a gelatinoid binder. *Swell* is caused by the incorporation of air into the cream, by the viscosity of the cream, by the rate of freezing, and by the speed of the agitating mechanism.

A clean cream containing about 22 percent of fat is probably the most satisfactory grade of cream for ordinary use. Preferably it should be one day old, being kept meanwhile at a low temperature. If pasteurized cream is employed it should be allowed to age before use. Homogenization increases viscosity and tends to improve the body and texture; this process, however, requires special machinery and would not be used in an institution or household. The use of condensed milk tends to better the body and increase the smoothness of the ice cream.

In the manufacture of ice cream on a large scale certain "fillers" and "binders" have come into quite general use. A filler is used to give body; a binder, to prevent coarse crystallization on holding for a considerable time. Starch, flour, eggs, and rennet are the most commonly used fillers, but their use is not always attended with success, and they are probably being used less and less. Binders, on the other hand, are very commonly used, especially where the product is shipped to a considerable distance and held for a greater or less time before use. Gelatin and gum tragacanth are the most widely used binders, either under their own names or as fancifully named "ice-cream powders."

The use of binders has caused more or less friction between manufacturers and food officials. The most common arguments against them are that they conceal inferiority and age, that they augment the swell unduly, that they encourage the use of low-grade materials, and that they make difficult adequate food control. The proponents of binders, on the other hand, urge that they prevent granulation and consequent deterioration, that they discourage the return and reusage of unsold goods, and that their use assists trade regulation. It is apparent that the arguments for the use of gelatin and similar binders are mainly of commercial importance. In the household or the institution, where the ice cream will be consumed quite soon after its manufacture, there seems to be little to be gained by the use of a binder; in the wholesale trade, where often the ice cream must be shipped considerable distances and where the conditions of sale by the retailer are such that several days may elapse before a can is completely emptied, the reasons for the use of binders are quite convincing, and probably their use would avoid more evils than their disuse would cause.

The bacteriological infection of ice cream is a very important question and is a potent source of controversy between manufacturers and food officials. It is true that considerable ice cream has been sold in the past that was unfit for human consumption, but equally as true is the statement that the great bulk of the ice cream offered to the consumer today is a clean and wholesome product. In the early days of ice cream manufacture, insanitary basements and factories totally unsuited for the purpose were all too common, but more and more do we find that the progressive ice cream manufacturer realizes that a clean, sanitary factory not only yields a better product, but is also a direct asset in his trade.

The *Journal of the Outdoor Life* has initiated a correspondence exchange for the benefit of shut-in tuberculosis sufferers. A correspondent suggests that "tuberculous patients at sanatoriums and at home might find much pleasure and relief from the tedium of their shut-in life in the playing of chess by correspondence with others similarly situated. There would be no fear of infection from the correspondent; agreeable acquaintances would be made; interesting games developed; and a healthful occupation afforded for the minds of all participating."

Having to spend an enforced rest in one of the big London public hospitals, I made friends with a dear little girl—a tuberculous patient—from the adjoining children's ward. One day, having overheard a remark, she asked me, with amusement struggling to get the ascendency over her astonishment: "Is you a nurse?" I told her I was, and I had come such a long way to nurse the soldiers. "Well, fancy you being a nurse, and all the time here I have been finking you was a lady."—Nursing Times.

Dreams pass; work remains. They tell us that not a sound has ever ceased to vibrate through space, that not a ripple has ever been lost upon the ocean. Much more is it true that not a true thought, not a pure resolve, nor a loving act has ever gone forth in vain.—F. W. Robertson.

We are all egotists in sickness and debility. An animal has been defined as "a stomach ministered to by organs;" and the greatest man comes very near this simple formula after a month or two of fever and starvation.—Oliver Wendell Holmes.

THE X-RAY DEPARTMENT OF COOK COUNTY HOSPITAL

Requirements of an Efficient X-Ray Service—Increase in Demand for Services—Fine Equipment of Enlarged Department at Cook County

By EDWARD S. BLAINE, M. D., Instructor in Roentgenology, Northwestern University Medical School; Roentgenologist to Cook County Hospital, Chicago

IT is now a generally accepted fact that a hospital of large bed-capacity requires an efficient and well-equipped x-ray department. This is beginning to be conceded even by those who formerly were wont to give up only a few square feet of space and relegate it to the basement of the building, the worst possible place for x-ray apparatus efficiency. With a daily average number of patients around the two-thousand mark, the x-ray service must be carefully planned, must have ample floor-space, a proper location in the building, and an arrangement of rooms permitting economical handling of patients and materials. This, of course, also holds true in regard to hospitals of smaller capacity. In either case, the patient must be cared for with least inconvenience and without sacrificing any procedure that would tend to assist in obtaining the most knowledge possible by the x-ray method. Equipment is to be desired which will allow greatest ease in handling the patients or which makes the technic simpler.

For many years the x-ray department of Cook County Hospital did not receive from the governing board the attention that it deserved. Appropriations were not made for new equipment, and supplies were difficult to obtain. With this handicap, the department struggled along as best it could, in a tiny, cramped space, with little or no convenience for this special branch of hospital work. Fig. 1 is a plan of the rooms of the old department. In these small quarters were to be found antiquated coils, worn-out x-ray tubes, and a few articles which were in a musty or in an unusable condition. None but fracture cases and a few bone lesions were examined because of the lack of proper equipment. Deep roentgenography was practically impossible. It was apparent that new equipment had to be secured, and, lacking an appropriation for its purchase, an arrangement was made with the Victor Electric Company for the use of such pieces of x-ray apparatus as were necessary to carry on the work properly. By this means only was it possible to give the hospital patients the benefit of x-ray examinations of some of the medical cases in addition to the few surgical ones. Roentgenoscopy of the thorax in pulmonary and cardiac lesions and the study of gastro-intestinal cases was introduced in the winter of 1913, and x-ray therapy, both deep and superficial, was instituted shortly afterward. As soon as this took place, the number of patients sent for x-ray service trebled. The amount of work increased so much that it was necessary to add to the personnel of the department, which then consisted only of a roentgenologist and one assistant. A clerk was added, and later a plate-developer was engaged for the dark-room work. Soon afterward a trained nurse and an orderly was assigned to the department, and a medical photographer was added to the personnel. The work of the department soon showed a great improvement in quality and it was soon noticed that, the better the work of the department became, the greater was the demand for its service. At present the average number of patients examined a month is more than a thousand. About nine hundred of these are roentgenographic cases, from one to twelve plates being made in each examination. An average of eighteen hundred plates a month, or about twenty-two thousand per year, are used. Roentgenoscopic cases average close to three hundred a month, part gastro-intestinal and part pulmonary and cardiac lesions. X-ray treatments number approximately twenty-four hundred during the year. These include superficial and deep therapy for skin lesions, benign and malignant tumors, etc.

With the opening of the new hospital building in 1914 the Roentgen department finally was given some of the consideration that was its due. In Fig. 2, the plan of the new x-ray department, it will be seen that it contains approximately five thousand square feet of floor-space, divided into fourteen rooms grouped on both sides of a large corridor, which runs east and west. The rooms on the south side of this corridor are assigned to administration, consultation, plate exhibition, a waiting-room for women, a toilet-room, a room for plate-storage, and the plate-developing room. Entering the waiting-room (Fig. 3), one finds benches for patients, and back of a railing, which extends across the room, space is given to four large illuminating-racks which provide means for the exhibition of several hundred roentgenograms showing normal and pathological conditions. Each of these racks is lighted by three Type P Cooper-Hewitt lamps, with automatic starting device. These are placed vertically, one in each of three sections. While this arrangement does not give an entirely even distribution of illumination, it is found quite sufficient if the denser x-plates are placed over the central and more strongly lighted part, and the thinner ones to the

outside of this area. This evens up the illumination by partially diffusing the light.

A consultation room 12 by 28 feet is equipped with an illuminating-box which is 20 feet long by 21 inches high. This is also equipped with Cooper-Hewitt mercury vapor-lamps. Four tubes are used, and these are placed in a single line. A Victor x-ray stereoscope with tungsten bulb lighting is mounted on a special rack at one end of the room. In this room is also shelving for the filing of the more recently made roentgenograms, the shelf-capacity being about eight thousand plates. Card index, filing cabinets, and typewriter are also located in this room. It is here that the x-ray diagnosis or readings are made by the roentgenologist. From the consultation room one enters the library, in which is a large bookcase containing x-ray literature, books, journals, etc. There are

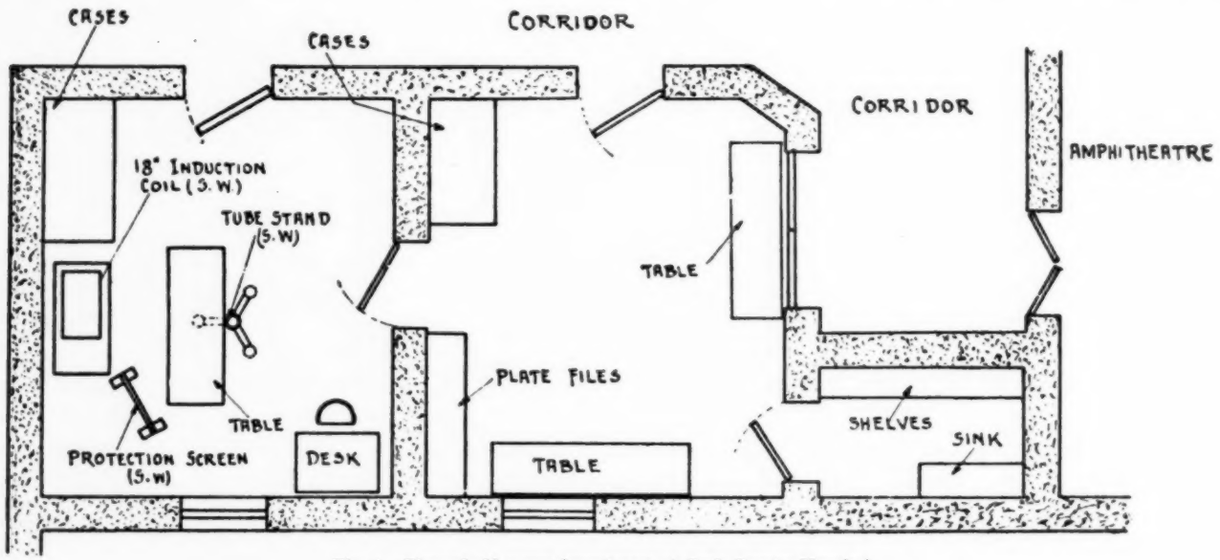
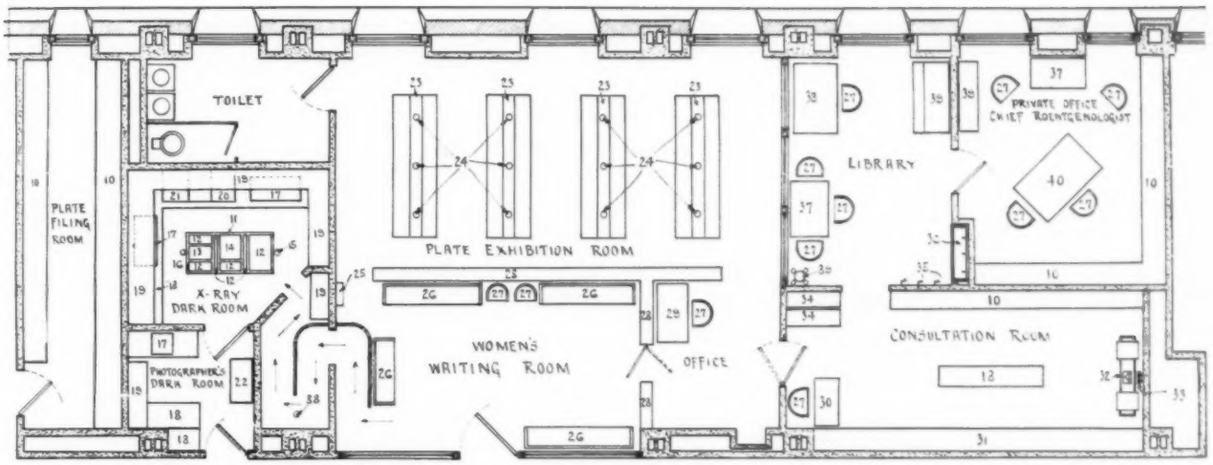


Fig. 1. Plan of old x-ray department at Cook County Hospital.

also a writing-table and a mounted skeleton. This room provides accommodation for visiting physicians and surgeons engaged in postgraduate x-ray work. Off the library is the roentgenologist's study. This room contains, besides desk, chairs, table, and bookcase, shelf-space for the plate-filing for about sixteen thousand plates.

From the women's waiting-room a doorless zig-zag entrance leads by three turns into the x-ray plate-developing room. A large stone tank, a modified Bowen type (Fig. 4) is placed in the center of the room. This allows the worker to approach all four sides of the tank. The tank is set 18 inches high from the floor on a heavy pipe frame; this is to allow easy draining of the several compartments into large earthenware crocks placed underneath. This is a convenience when one desires to reduce, by precipitation, the silver which is contained in the used solutions, often a goodly amount and well worth getting. An overflow permits a continuous flow of water around three sides of both the developing and the hypo baths. There are three taps, for cold water, warm water, and ice-water, respectively, so that any degree of solution-temperature can be obtained at any time of year; thus, in summer the ice-water is used to bring the cold water—sometimes more than 80 degrees—down to 65 degrees, and in winter the warm water is used to bring the cold water—often as low as 50 degrees—up to 65 degrees. In this manner 65 degrees can be had throughout the year. Two large sinks and abundant table-space are found in three sides of this room, and there is also an equal amount of shelving above. The overhead lighting consists of an inverted semi-direct bowl which has three different lights inside, each having a separate switch, an 8-c. p. ruby, a 16-c. p. ruby, and a 40-watt white. Each of these lights can be turned on independently of the other by hanging push-button switches. Using the 8-c. p. ruby light, it is safe to handle the bare exposed x-ray plates without fogging. With this lighting there is considerable room-illumination. An electric tray rocker is conveniently placed, but practically never used because of the success of the tank method. Photochemical supplies are stored on shelving in a recess in the entry-way. Next to the plate-developing room is the photographic dark-room; this room contains a sink and conveniences for the photographer, who does his work without interfering with or disturbing the x-ray plate-developer. This allows the medical photographer to develop photo-plates, make enlargements, etc., independent of the x-ray plate-developing.

The rooms on the north side of the main corridor are used for roentgenoscopy, roentgenography, and roentgenotherapy. The roentgenoscopic



SOUTH OF CORRIDOR

10. Plate-filing shelves.
11. Developing tank.
12. Water compartment.
13. Compartment for developer.
14. Compartment for hypo.
15. Inlet and mixing chamber.
16. Outlet.
17. Sink.
18. Work table.
19. Supply shelves.
20. Tray developer.
21. Table with Victor tray-rocker.
22. Supply case.
23. Plate racks for exhibiting plates.
24. Cooper-Hewitt lamps for illuminating plate racks.
25. Clock.
26. Benches.
27. Chairs.
28. Rail.
29. Clerk's desk.
30. Typist's desk.
31. Inspection frame, illuminated by Cooper-Hewitt lamps, with plate files underneath.
32. Victor stereoscope, with plate files underneath.
33. Electric fan.
34. Card index.
35. Coat hooks.
36. Clothes locker.
37. Reference table.
38. Assistant roentgenologist's desk.
39. Bookcase.
40. Chief roentgenologist's desk.
88. Dim red light.
89. Skeleton on stand.

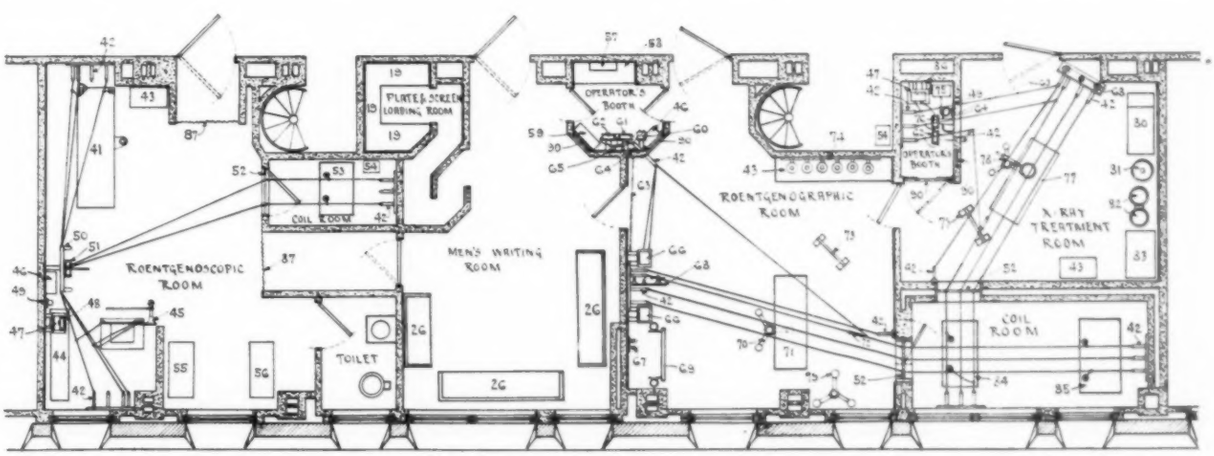


Fig. 2. Plan of new x-ray department at Cook County Hospital.

NORTH OF CORRIDOR

19. Supply shelves.
26. Benches.
41. Victor horizontal roentgenoscope.
42. Insulators.
43. Utility table.
44. Table for lateral recumbent position.
45. Victor vertical roentgenoscope, arranged for orthodiagraphy.
46. Rheostat for interrupterless transformer mounted on wall.
47. Victor Coolidge transformer on insulating shelf.
48. Victor Coolidge ammeter mounted beneath insulating shelf.
49. Victor Coolidge regulator.
50. Victor Coolidge high-tension switch.
51. Milliampere meter mounted on switch.
52. Glass insulator.
53. Victor 2 K.W. interrupterless transformer.
54. Victor Coolidge rotary converter.
55. Bausch & Lomb projector.
56. Bausch & Lomb photomicrograph.
57. Service box containing main switches for entire department.
58. Lead-lined plate box for unexposed plates.
59. Lead-lined plate box for exposed plates.
60. Victor Coolidge battery rheostat.
61. Victor Coolidge battery ammeter.
62. Milliampere meter mounted on wall.
63. Cord from high-tension terminal board to spark-gap indicator and vacuum reducer knob.
64. Spark-gap indicator and vacuum reducer knob.
65. Victor teleflasher.
66. Storage battery on insulated shelf, with special switch arranged so that one battery is on charge while the other is in use.
67. Charging board for storage batteries.
68. High-tension terminal board.
69. Vertical stereoscopic shift.
70. Victor No. 3 radiographic stand.
71. Victor No. 1 radiographic table.
72. Aerial insulators for connecting milliammeter into high-tension line.
73. X-ray protection screen for convenience of visiting roentgenologists.
74. X-ray tube rack.
75. Rheostat for interrupterless transformer on truck.
76. Victor Coolidge ammeter mounted on wall.
77. Treatment table.
78. Victor No. 4 treatment stand.
79. Extra x-ray tube stand, with broad focus Coolidge tube for stomach work.
80. Cystoscopic table.
81. Sterile water tank.
82. Basin.
83. Instrument cabinet.
84. Victor 10 K.V.A. interrupterless transformer.
85. Victor Wantz special interrupterless transformer.
86. Victor therapy flasher.
87. Light-proof curtain.
90. Lead-glass window.

room (Fig. 5) contains, in addition to the roentgenoscopes, a large camera, an enlarging easel, a photomicrographic apparatus, and a large balopticon for opaque, microscopic, and regular lantern-slide projection, for use and service in medical and surgical clinics of the hospital.

The roentgenoscopic equipment consists of a closed-core A. C. Victor transformer placed in a separate room to eliminate noise, connected by overhead high-tension wires, covered to eliminate brush discharge, to a two-way switch mounted on the wall between horizontal and vertical roentgenoscopes. Both of these instruments are used with fine focus point Coolidge tubes. The Coolidge or cathode control and its energizing apparatus are mounted on the wall below the two-way switch. The x-light as well as the overhead blue light are both actuated by a magnetic switch the action of which is controlled by the examiner by a finger push-button which is mounted on the shutter control-arm of each roentgenoscope. This form of x-light control does away with the old and unhandy foot-switch with its flexible cord which lies on the floor. Foot-switches are too easily stepped on by patients or visiting physicians, thus setting the tube in action, and the resulting damage to the tube is often cause for grief to the roentgenologist. The rheostat control of the secondary current is mounted on the side wall between the instruments, at a convenient height, and is accessible from either one. Meters for both the secondary or tube milliamperage and Coolidge filament amperage are mounted above the rheostat. The Coolidge current supply is obtained by use of a small D. C.-A. C. rotary and a small transformer.

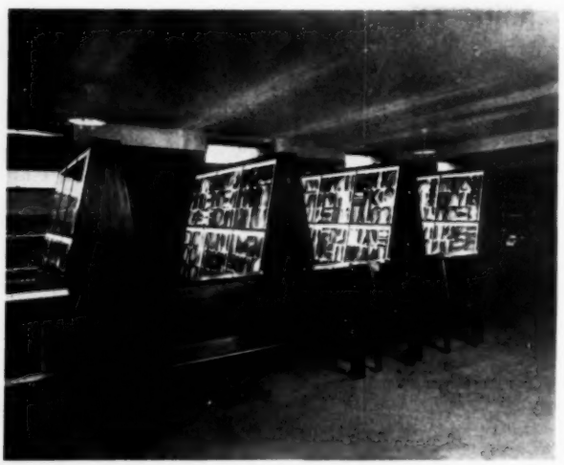


Fig. 3. Waiting room, x-ray department, with illuminating racks for the exhibition of roentgenograms in the background.

The vertical roentgenoscope is equipped with an orthodiagraphic attachment which permits independent screen excursion in heart examinations, and both the vertical and horizontal shutter controls are easily held in the hollow of the hand

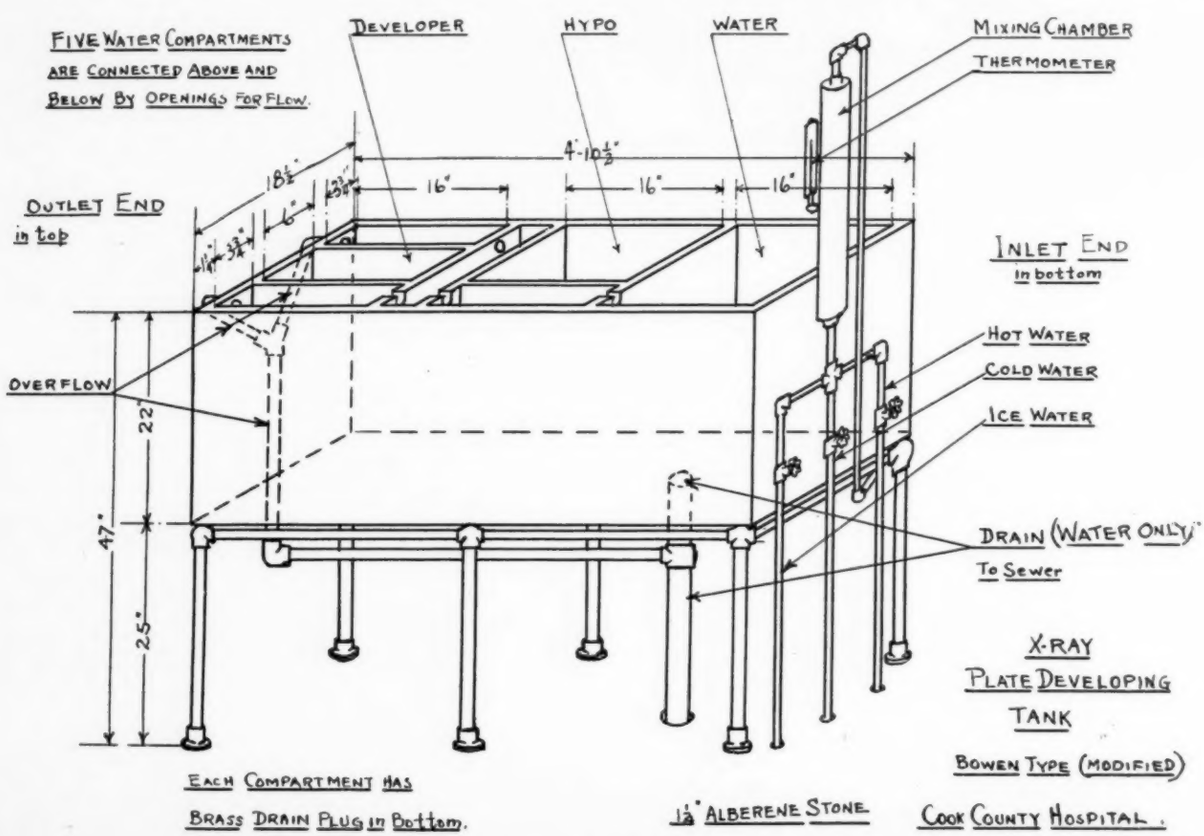


Fig. 4. Stone plate developing tank of a modified Bowen type.

close to the finger push-button previously mentioned. Thus the x-light, the overhead or dimmed room light, and the shutter openings on the x-ray screen are all managed with the left hand in one position. The front of this scope is free of platform or other obstruction excepting for a movable step for small patients. This permits the regular hospital carts to be wheeled directly in front of the instrument and behind the screen without taking the patient off the cart, a great convenience in the case of patients too weak to move. A long, narrow, high table on large casters is used in demonstrating the change of fluid level in hydrothorax or pyopneumothorax, or in cavities. In such cases the patient is examined in the horizontal posture, either supine or right or left lateral recumbent, etc. Heart orthodiagrams are made with grease pencil on sheets of clear celluloid (12 by 16). The diagram is later traced and transferred to the x-ray report, which is then

Fig. 5. Roentgenoscopic room.

attached to the patient's history. A toilet opens off the roentgenoscopic room, a necessity in some cases when the patient is unable to retain the barium clysma in colon examination.

A second waiting-room, for male patients, is located between the roentgenoscopic and roentgenographic rooms. Off this waiting-room is a zigzag entrance to a small lead-lined room for plate- and screen-loading. No water or solutions being in this room, there is no chance of spoiling the delicate surface of the intensifying screens. Here, too, is kept the supply of x-ray plates.

The operator's booth (Fig. 6) is entered from either the waiting-room or the roentgenographic room. In this booth is placed a large switchboard containing the main electric current leads for the entire x-ray department. The service-wires leading from this main switchboard to the roentgenoscopic, the roentgenographic, and the roentgenotherapeutic transformers are placed in metal conduits under the floor in a 5-foot pipe space. Exposures are made from within the booth by a push-button control which actuates a magnetic switch. This switch has various time-commutators, which are rapidly and easily changed as desired. The Coolidge tube spark-gap resistance also is regulated and controlled from within this room. The entire room is lead-lined for the protection of the operator. Lead plate-boxes are used, one for the unexposed and one for the exposed plates. Rheostat and meters are conveniently mounted. The spark-gap is tested and measured by the operator within the booth, who looks through a lead-glass window into the roentgenographic room.

On account of the fluctuation of the hospital

Fig. 6. Operator's booth.

current supply, it was found necessary to use battery current for the Coolidge tube used for the roentgenographic work, and an arrangement (Fig. 7) is installed using two 5-cell (10-volt) batteries, which are placed on an insulated shelf. This current is non-fluctuating and perfectly steady, which keeps the tube at a constant back-up resistance. One of the batteries is being slowly charged while the other is in use, so that a fully charged battery is always ready. The charging is done without having to move the batteries from the shelf. A charging-board is mounted on the wall and the batteries placed at a height of 5 feet above the floor, which allows the specific gravity of the battery solution to be read by hydrometer

with ease at eye level. In the roentgenographic room is a Victor tube-stand of large size. A Victor stereo-tilting-top table is also in use. Overhead wiring with trolley reels permits easy handling of the tube connections. Chairs, utility tables, metal plates, Kelly-Koett eye localizer, and other accessories are also found in this room. Lead screens which can be moved about the room allow visiting doctors and assistants to dodge behind this protection during actual exposures. Tube racks are mounted on the walls. The main spark-gap of a large Victor x-ray transformer, located in a generator room near by is placed on the wall above the batteries and charging board. This spark-gap is in direct line and view of the

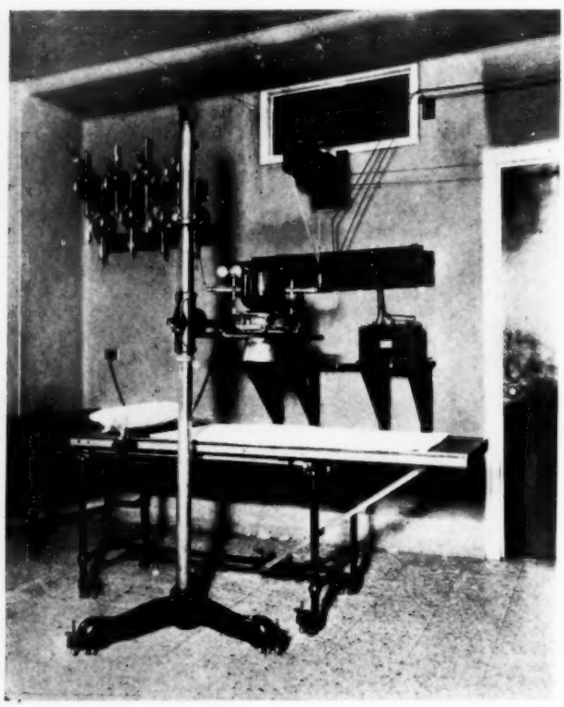


Fig. 7. Five-cell (10-volt) batteries for Coolidge tube cathode.

lead-glass window of the operator's booth, from where it is easily read.

The roentgenographic room is sufficiently large and roomy to allow regular hospital beds and carts to be rolled or wheeled directly under the tube-stand. This does away with the lifting and moving of patients who are in pain or who cannot be easily handled. In this manner, also, patients in restraint can be safely examined.

The roentgenotherapeutic room (Fig. 8) has a similar arrangement of operator's booth, lead-lined for protection, with lead-glass windows, and this, too, is equipped with all necessary meters and controls. A small D.C. rotary supplies A.C. current for the Coolidge transformer and cathode filament. Prior to the present exclusive use of the Coolidge tube in roentgenotherapy, a water-cooled gas tube was very successfully used. With the large number of treatments given the water-cooling was accomplished by a Victor circulating pump, which was placed on a well-insulated shelf above the tube stand. A small electric motor turned a rotating blade pump which provided a continuous stream of cold water directly behind the target. The heat was carried off as fast as was necessary to keep the tube vacuum at a constant degree.

A low table, 20 by 24 inches by 6 feet 6 inches, with a rather deep mattress, is used for the patient to lie on during treatments, some of which take more than half an hour; this provides comfort for the patient. A Victor treatment tube-stand allows close approximation (5 inches) of the tube target to skin surface. Lead shields and specially cut sheets of the same material, together with leather, aluminum, and copper filters and other convenient accessories, are in use. Ample

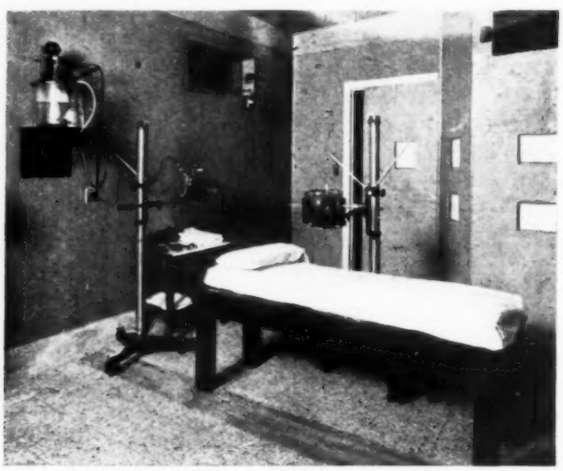


Fig. 8. Roentgenotherapeutic room.

consideration for safety in treatment is given. This room is used for roentgen therapy during each morning. In the afternoon the room is given over to the cystoscopist for ureteropyelography. The room is provided with proper conveniences for this work. A special operating-table, wash-basins, sterile water-tank, instrument-cabinet, etc., permit proper handling of cases which require opaque-solution injection of ureters, etc. It is but a step from this room into the roentgenographic room for the plate exposure. In this manner the patients are subjected to least danger in handling and moving between the time of injection and making of the plate.

All the flooring in the rooms in this group on the north side of the corridor is of tile, which makes it easy to move the heavy tube-stands and other large instruments, beds, etc., around the room when desired. On the opposite side of the

corridor the rooms have a composition flooring, which has a less severe surface to walk upon.

In the routine of the department the following division of the work is in force:

8 to 10, roentgen therapy.
8 to 12, roentgenography and plate-developing.
1 to 4, roentgenography and plate-developing.
9 to 11, roentgen plate diagnosis, reports, consultations.
11 to 12, or 1, roentgenoscopy.
2 to 4, consultations, demonstrations, etc., pyelo-ureterography.

The personnel of the department consists of the following:

1. A roentgenologist, who is chief or director of this branch of the hospital work. He must be a graduate in medicine with special training in x-ray diagnosis. His duties include the making of x-ray interpretations, reports of diagnoses, supervision of the department, etc. He is responsible for the accuracy of the work.

2. A radiographer, whose duties are those of technician in x-plate exposure, care of the x-ray

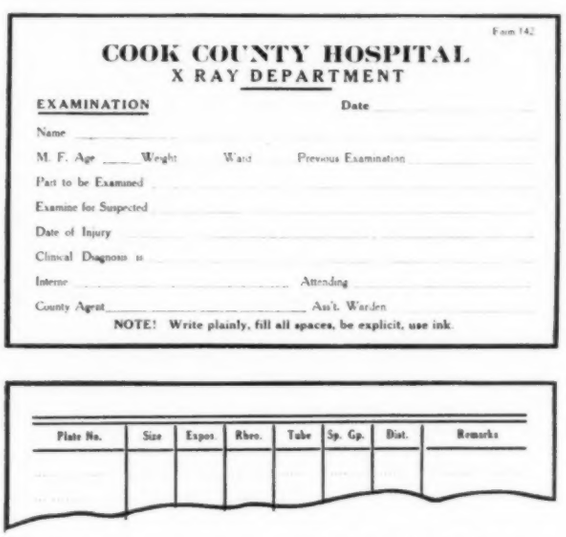

COOK COUNTY HOSPITAL
X RAY DEPARTMENT
EXAMINATION Date
Name
M. F. Age Weight Ward Previous Examination
Part to be Examined
Examine for Suspected
Date of Injury
Clinical Diagnosis is
Interne Attending
County Agent Asst. Warden
NOTE! Write plainly, fill all spaces, be explicit, use ink.

Plate No.	Size	Expos.	Rheo.	Tube	Sp. Gp.	Dist.	Remarks

Fig. 9. Card used as permanent record of examination by x-ray department; obverse and reverse.

apparatus and instruments, such as motors, tubes, etc.

3. A dark-room man, whose duties include the developing of all x-ray plates, making developing solutions, loading x-ray plates in envelopes, and intensifying screens, etc.

4. A typist or clerk, who records the diagnosis, cares for filing of plates, and does general clerical work.

5. A trained nurse, who assists in handling and arranging the patients, particularly the women and children.

6. An orderly, who helps around the department in various ways.

7. A medical photographer, who does this class of work for the members of the medical and surgical staff, such as lantern-slides, prints, reductions, photomicrographs, etc.

Patients who are to be examined are given cards 3 by 5 inches in their wards by the interns on the instructions of the attending physician or surgeon. Each is in the form of a requisition and is filed as a record of the case examined. On the reverse side are spaces for noting the plate number and the technic used in the exposure.

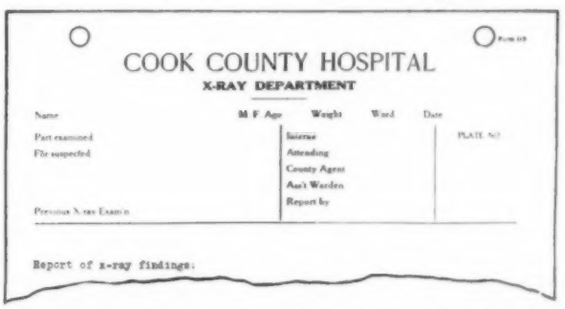

COOK COUNTY HOSPITAL
X-RAY DEPARTMENT
Name M F Age Weight Ward Date
Part examined
Dx suspected
Interne
Attending
County Agent
Asst Warden
Report by
PLATE NO
Previous X-ray Exam'n
Report of x-ray findings:

Fig. 10. Heading of report of x-ray diagnosis. The sheet is 8½ by 11 inches.

Reports of x-ray diagnoses in typewriting on a form 8½ by 11 inches are made the morning following the examination whenever possible. A cross-index is made on a card 3 by 5 inches according to the condition present. The patient's name does not appear on this card; on it are noted the anatomical part, age of patient, disease or pathological condition, the patient's number, with any other special notation. If more than one condition is present on a given roentgenogram, separate cards are made for each, and these are filed separately. The size of the plate is noted by let-

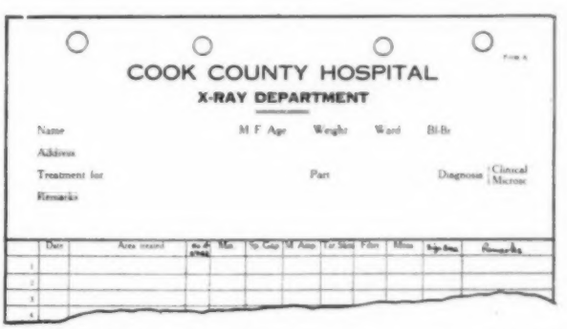

COOK COUNTY HOSPITAL
X-RAY DEPARTMENT
Name M F Age Weight Ward Bl-Bx
Address
Treatment for Part Diagnosis Clinical Microsc
Remarks
Date Area treated No. of Min. Sp. Gap M. Amp. Tot Skin Fdrs Minus Remarks

Fig. 11. Heading of record for therapeutic cases. The sheet is 8½ by 11 inches, and bears, on the reverse, anatomical outlines showing an anterior and a posterior figure.

ter, C for 8 by 10, D for 10 by 12, E for 11 by 14, and F for 14 by 17; thus 2779-C is an 8 by 10 plate, while 39521-F is a 14 by 17 size. A light manilla envelope is used for filing the plates, on which is a printed space for patient's number, anatomical part, pathological condition, and date of examination.

The record for therapeutic cases is on a sheet 8½ by 11 inches, with necessary spaces for accurate notation of technic used. On the reverse

side of this sheet are anatomical outlines (rubber stamp) showing an anterior and a posterior figure. On these diagrams are indicated the particular area or areas which were exposed during treatment.

The question of service of x-ray apparatus is always interesting to those engaged in hospital work, and therefore, in concluding this description, it seems only fair to relate the experience with the apparatus furnished by the Victor Electric Company. During the three years of service the x-ray transformers have been in daily use. This service was not intermittent, as is usual in this class of work, but practically continuous. From 8 a. m. often to 4 p. m. the running switch was seldom pulled out. As the apparatus was not specially built for this extraordinary use and as only the ordinary amount of care and attention are given, this record of service speaks well indeed for the designers. The other special pieces of x-ray apparatus have been of the greatest value in making the work easier and more accurate and have, in general, proved to be great time-savers in the routine work of the x-ray department.

A GERMAN RED CROSS HOSPITAL TRAIN

Many Hospital Trains Fitted Out by Private Philanthropy and Donated to the Red Cross—Completeness of Equipment and Organization

By C. E. WRIGHT, New York

THE present war has brought out some advancements in the care of wounded, one of the most useful being the highly organized and completely equipped hospital trains with which the German Government transports her wounded and the wounded of the enemy who fall into her hands. At present there are more than fifty of these hospital trains in constant use, bringing the wounded in from the field of battle to the large hospitals in the big centers. Some of these trains were fitted out by the government, but over half of them are the results of private philanthropy, being built and fitted out by wealthy German citizens and turned over to the Red Cross Society as gifts. They vary in length from thirty to fifty cars, and in cost from $25,000 to $50,000. Each train, as it is turned over to the Red Cross Society, passes out of the donor's hands entirely; he has nothing further to say about its management thereafter, but the train is always known by the donor's name, and in many cases the donor continues to pay all of the running expenses, staff salaries and supply bills, which run about $5,000 to $6,000 a month.

The accompanying illustrations show the Friedlander Red Cross train, which was donated by Baron von Friedlander-Fuld, a wealthy coal merchant of Berlin. It is probably the most complete and finest equipped train of its kind ever built. The baron refused to say what it cost, but a man in that business estimated it at about $54,000. It consists of forty cars, each car about forty feet long. Twenty-nine cars are for wounded soldiers, two for wounded officers; then there are an operating car, dispensary car, two store cars, kitchen, two cars for heating train by steam, car for nurses and one for doctors, car for the men employees, cooks, firemen, etc.

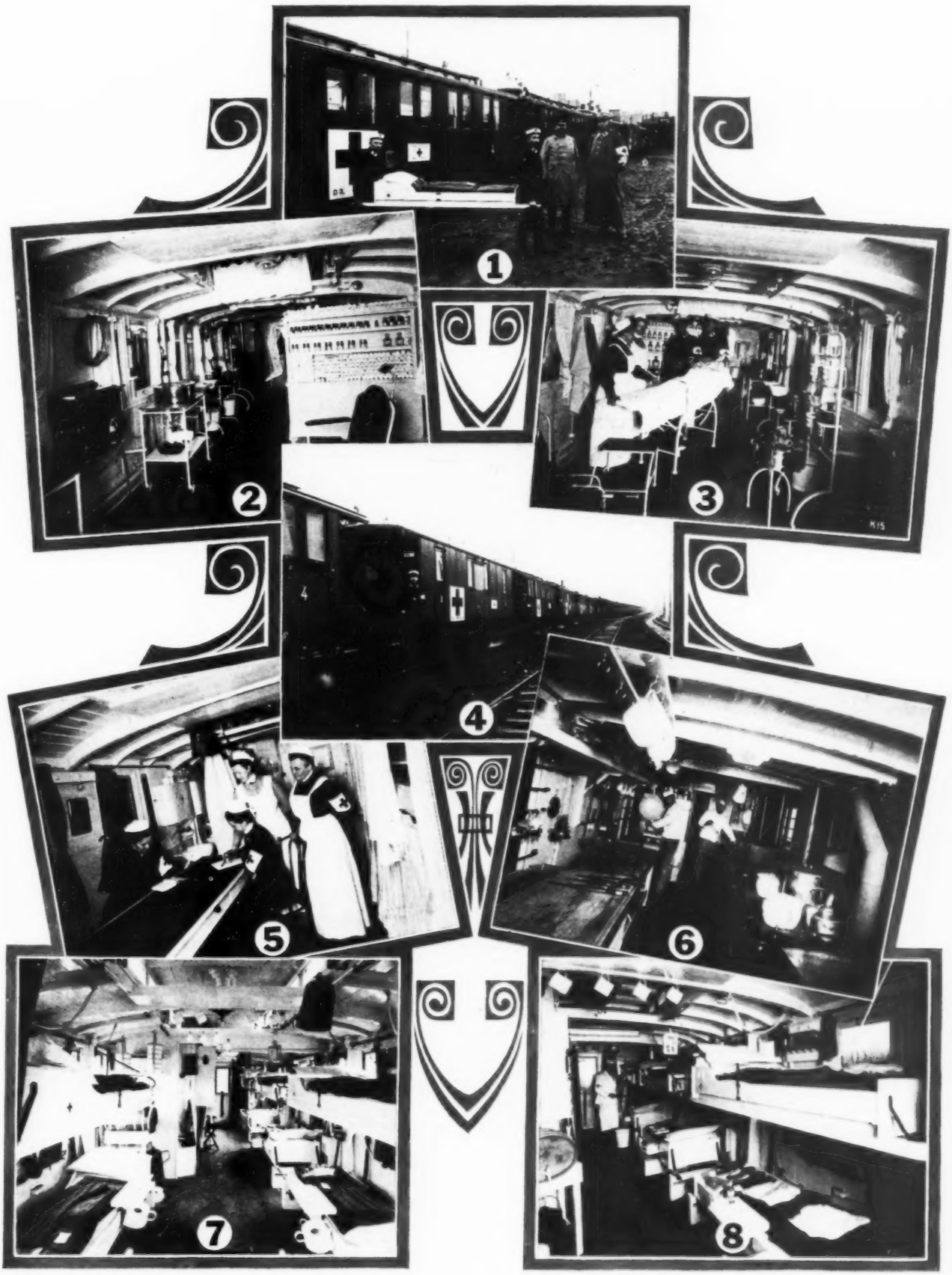
Fig. 1 shows one of the beds taken out of the train and used as a stretcher. It also shows the chief surgeon and the military officer in command of the train.

The dispensary car (Fig. 2) is a drug store with a large stock of every medicine used in modern practice. The two heating cars each contain a big boiler to develop steam to heat the train. One is placed near the rear and one near the middle, and steam is also taken from the locomotive at the front end of the train. The store cars are ordinary freight cars divided into compartments for the various stores. One contains food and is placed next to the kitchen car. The car for the male employees is fitted up with built-in bunks like a crew's quarters on a ship. The four doctors and the four trained nurses have each half of an extra large car with beds like our sleepers.

Fig. 3 shows a section of the operating car. This car is carried near the end of the train, next to the doctors' car. As the illustration shows, it is equipped with every possible device which science can devise. Like all operating rooms, it is painted a pure white. In addition to a gas light, there is a powerful electric light operated by batteries and giving the best possible light for operations. In serious cases which cannot wait until the base hospitals are reached, operations are performed in this car. Two of the German surgeons and two nurses are shown in this picture.

Fig. 4 shows the exterior of the train. Each hospital car has its male nurse. Besides the red cross on the side, each car also has a red cross on the roof to protect it from aeroplane fire.

Fig. 5 shows the quarters of the trained nurses. Their beds are built in like our sleeper bunks



German Red Cross hospital train. Fig. 1—One of the beds taken out of the train for use as a stretcher. Fig. 2—Dispensary car. Fig. 3—Section of the operating car. Fig. 4—Exterior of the train. Fig. 5—Quarters of the trained nurses. Fig. 6—Interior of the kitchen car. Fig. 7—Interior of a hospital car. Fig. 8—Another view of a hospital car.

Copyright by Brown & Dawson, New York.

at the right. Behind the big curtain are wash basins.

Fig. 6 shows the interior of the kitchen car, which is equipped with stove, steam cookers, tables and other culinary equipment. The supply car is seen beyond.

Fig. 7 shows the interior of one of the hospital cars. This car contains ten cots, six on one side and four on the other. The enclosed space in the center of the car on the left side contains wash rooms and toilets. The beds are hung on springs and can be taken out on the field and used as stretchers. Each bed has a complete individual outfit, which includes a sponge, cup, glass, toothbrush, etc. The cars all have a gas lighting system, and in addition there are oil lanterns for outside use. The cars are also equipped with candle lanterns for emergency use. Individual outfits of socks, slippers, and nightshirts are laid out on each cot. Straps and ropes are placed above the cots in such position that the wounded can use them to raise themselves up by. The car also contains a barrel of sterilized water, buckets for carrying food, and other appurtenances to assist in the care of the wounded without loss of time.

Another illustration (Fig. 8) shows another view of a hospital car interior. Note the telephone on the wall just above the water barrel. Also note the outfit laid out on the bed—slippers, pair of wool socks, steam hot-water bottle, cotton nightshirt, flannel nightshirt, handkerchief, toothbrush, glass and bottle of mouth wash. Each bed has a pillow, mattress, rubber sheet, two cotton sheets, and two blankets.

Hospital cars for wounded officers are almost the same as those above described for the wounded soldiers, except that they are equipped with a few little added refinements, such as curtains before each bed.

All hospital cars are connected with the operating car by a telephone system so that the doctor and trained nurse on duty can be called at any time. These trains, of course, travel very slowly, making only five or six miles an hour, special care being given to running without any sudden starts or stops. The staff consists of four doctors, four trained nurses, thirty-seven male nurses, one for each hospital car and six extra, three cooks and two firemen. Each male nurse sleeps in his own car on a folding cot, which is placed in the aisle.

TENT HOSPITAL FOR PARALYZED CHILDREN

Fordham Hospital, New York, Creates Inexpensive Quarters to Treat Victims of Infantile Paralysis—Equipment Negligible—Results Reassuring

By SAMUEL W. BOORSTEIN, M. D., Instructor in Orthopedic Surgery, Fordham University Medical School; Adjunct Visiting Orthopedic Surgeon, Montefiore Home and Hospital; Chief of Orthopedic Department, Fordham Hospital O. P. D.; Clinical Assistant, Orthopedic Department, Vanderbilt Clinic, Columbia University, New York City.

THROUGH the united efforts of the Board of Health, medical and lay papers and the After-Care Committee of Infantile Paralysis Cases, one could expect that sufferers from the epidemic of 1916 and probably also from the previous epidemics will report regularly for treatments for a long time—from two to three years. According to the report of the After-Care Committee, approximately five thousand children were not able to be treated by private physicians and had to receive treatment in hospitals and clinics. Thus the hospitals of this city had to meet the difficult problem.

There was no need of making special preparation in the orthopedic hospitals for the after-care of these patients. These hospitals have always had such patients since 1907 and have used the best methods of treatment. With the increase of the number of patients they had only to increase the number of assistants and to add extra rooms. The general hospitals, on the contrary, while they had orthopedic clinics, had limited facilities for such prolonged treatments and had to make special provisions to meet the necessities, as it was safe to assume that they would get many of these patients for treatment. In some hospitals, where an extra room or two could be spared, these were simply shifted for that clinic. As is usually the case where the hospitals are crowded and no adequate room can be spared, the children in some hospitals were therefore so crowded that they could not get the proper treatments and proper ventilation.

At Fordham Hospital we had the same problem. There was no adequate room in the hospital to be spared for administering treatment to these patients, but we had plenty of ground facing the beautiful Bronx Park. We put up a large tent on the lawn (Fig. 1). The size of the tent is 16 by 30 feet. It has a wooden floor one foot high from the ground. Of course, one may use tarpaulin instead of a wooden floor. The tent has a roof and

fly. For heating there are four rows of 2-inch steam pipes surrounding three walls of the tent (Fig. 2). The side opposite the entrance has a space without pipes so that it may be used as another entrance. The length of the steam pipes for the entire tent is 256 feet. The height of the tent at the center is 12 feet, while at the sides it is 6 feet from the floor, giving ample space. Where steam cannot be obtained stoves may be used in their stead.

Fig. 1. The tent for the treatment of anterior poliomyelitis at Fordham Hospital, as seen from a distance.

In this large tent we fixed up along the full length of one side a desk, and massage and examining tables; there was room for four tables. At the side opposite the entrance we have a large mirror for exercises and a special ladder and electrical apparatus. In a second corner we have special toys, large and small, for exercising the younger children and for making the time pleasanter for the older children. We have also many toys suspended from the ceiling for exercises of the upper extremities (Fig. 2). On one of the poles we have an exerciser used in the ordinary gymnasium. Along the other wall there are benches and chairs for the mothers and small chairs for the children. There is also a basin with water and a washstand. We found that the tent could hold fifty children and twenty adults comfortably.

Fig. 2. Corner of tent, showing heating facilities and children exercising on toys.

The location of the tent outside the hospital helped also to avoid the interference of these small patients while passing through the regular dispensary rooms. The simplicity of the outfit proves that it can be fixed up in any general hospital on short notice, provided, of course, there is spare room on the hospital grounds.

This tent was put up in September, so we had the use of it the entire winter. We found it very easy to heat. It requires a small increase for the hospital plant to warm it up, and the sun shining on the canvas helps to warm it very quickly. During the entire winter we missed only about five treatments owing to the strong wind then prevailing, especially as the hospital is surrounded by parks and is located on a high level. We really feared the wind more than the cold. Of course, one can provide wind-breakers. The inside of the tent is extremely cheerful and has an excellent effect on the children. They enjoy running around and playing with each other and with the toys (Figs. 3 and 4). These children, as is known, need a great deal of heat for the limbs and we found it warm enough in the tent to administer the treatments. The children had to take their wraps off as soon as they entered, and were not permitted to put them on until they were ready to leave. Very few of the children caught cold. There is a little difficulty in ventilating the tent, but when the door opposite the entrance is opened at the top, the air is cleared very quickly. A

Fig. 3. One corner inside the tent, showing the general appearance of the patients.

small fan may be used at the opening to circulate the air.

The advantage of such a tent in summer is obvious. The children may play on the grass until time for their treatments. These cripples are usually confined to their rooms and do not get enough fresh air either because their mothers are afraid to have anyone know of the children's deformities or because they are too busy to accompany the children. Thus when the children are brought to the clinic they enjoy the fresh air for two or three hours. In summer we intend to have these children dressed in tights only and have them sit on the grass or on a sheet of tarpaulin and have their limbs warmed up by the sun; they will afterward be called in for treatments. The tent will be uncovered on all sides. We cannot tell as yet how it will work, but it sounds plausible.

Fig. 4. Nearer view of the inside of the tent at the end of treatments.

The use of the tent for the last eight months leads me to mention the following advantages:

1. It is very simple and can be put up on short notice in any hospital.
2. Where there are many children, several

such tents can be put up to avoid congestion and danger of contagion, and there is less danger of a panic.

3. The inside of a tent is cheerful and has an excellent effect on the children.

4. While waiting for treatment or while being treated, they get plenty of fresh air, which they need very badly.

5. There is less danger of catching cold than in a hot, suffocating waiting room, which is found in every dispensary.

6. In summer the children are in the open air.

7. Sun treatment can be administered at the same time that massage and exercises are given.

8. The tent can be fixed up near every playground in the parks; thus the children can receive the treatments and exercises if the physician desires to use that method of exercising.

I wish to express my sincerest thanks to Dr. Brannan, president of Bellevue and Allied Hospitals, and Dr. O'Hanlon, general superintendent, who have been extremely kind to the department and have devoted a great deal of time and energy to fit up the tent with all the required needs. I also express my thanks to Mr. P. J. Cawley, engineer of the hospital, for his many kind suggestions.

OKLAHOMA HOSPITAL, TULSA, OKLA.

Modern Features of a Hospital Built for Service, Not Show, in a Western Industrial Community—Green Finish Used in Operating-Room—Inclines Instead of Staircases

By FRED S. CLINTON, M. D., F. A. C. S., President, Tulsa, Okla.

THE Oklahoma Hospital is planned and built to suit the needs and service of the modern requirements of an active industrial community. Its lines are simple and its construction is substantial. It is fireproof, and its compactness and completeness will furnish a type for the moderate-sized hospitals needed in localities where service without show is sought.

The hospital is centrally located on a high corner lot overlooking the city and country in every direction, yet accessible to the street and interurban railways.

The accompanying floor plans give a comprehensive outline, and a close study will suggest valuable ideas for actual utilization of all available space. The use of inclines or ramps instead of elevators or stairs will appeal to many when constant service, economy of operation and upkeep as well as lack of noise and dirt are considered.

All four floors are above ground. All rooms have outside exposure. All doors open into rooms, have checks and transoms. The latter open from top.

Fig. 1. Oklahoma Hospital, Tulsa, Okla. Note simple lines and substantial construction.

Each floor is complete within itself, having private, semiprivate, bath, toilet, and rest-rooms. The kitchenette has a refuse receptacle, refrigerator, warming oven, steam table, hot plates, tray shelves, dish rack, kitchen sink, cabinet for dishes, etc. Each floor has a bedpan sterilizer, utensil racks, etc. All private rooms are finished in different tints or colors. Children's rooms are made attractive with nursery decorations.

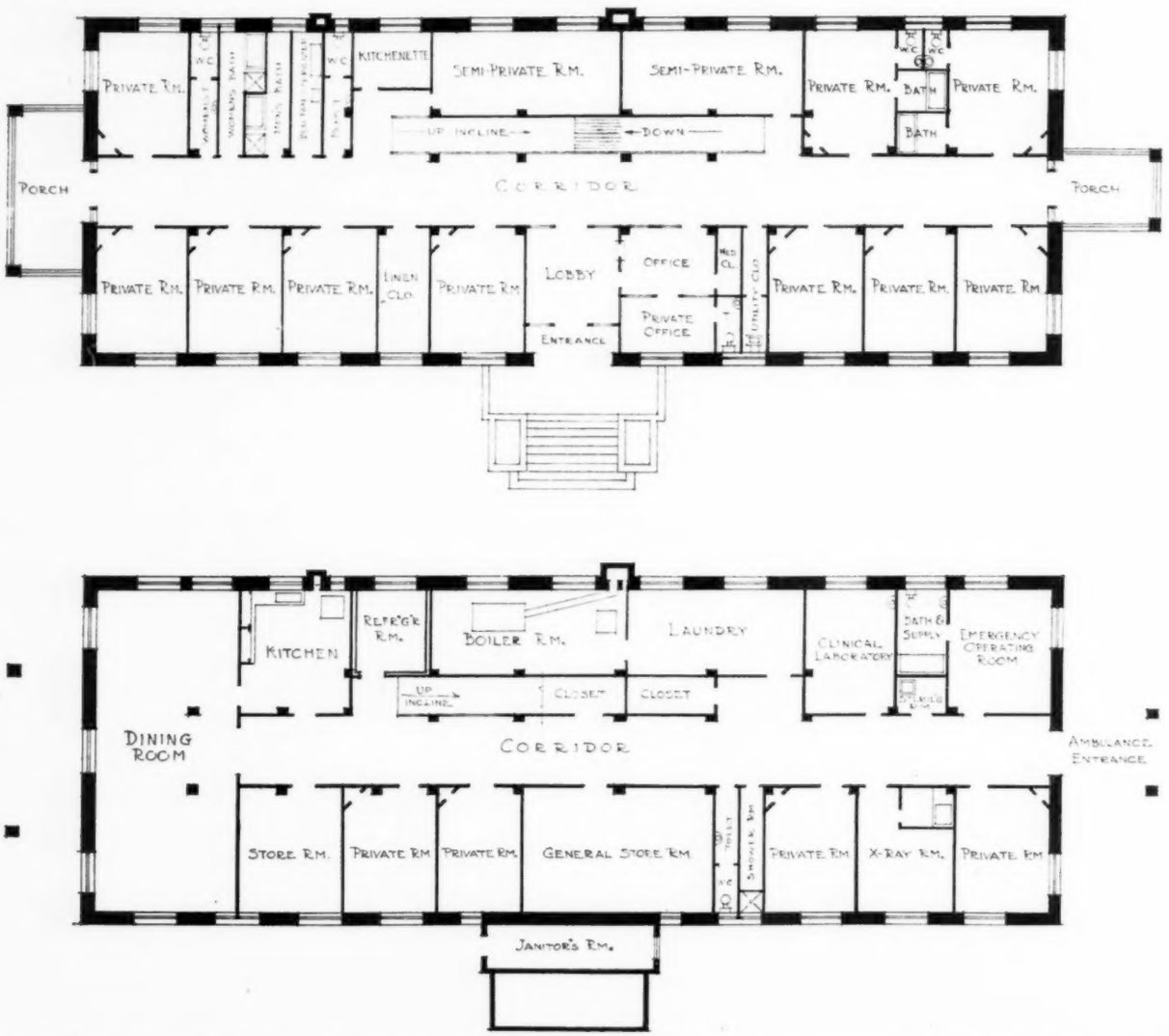


Fig. 2. Ground-floor and first-floor plans of Oklahoma Hospital. The emergency operating-room is conveniently located next the ambulance entrance on the ground floor.

All patients' rooms are supplied with ample receptacles for fans, hot pads, lights, etc. No ceiling lights are used except in toilets, kitchenette, rest room, corridors, etc. All rooms, corridors, etc., are finished with sanitary base.

The emergency operating-room at ambulance entrance facilitates handling of severely injured, poisoned, or other suitable patients with least disturbance to the household or to formal operations elsewhere. The x-ray and pathological laboratories are also on the ground floor. The engine room has the boilers, circulating hot-water heater, vacuum cleaner, incinerator, high-pressure boiler, etc., completely separated from the remainder of the floor by a solid wall and one room so as to lessen heat and noise. The hospital has low-pressure steam heat, electric lights, sanitary plumbing, vacuum cleaner, silent signal system, inclines, intercommunicating telephones, circulating hot water and other modern conveniences. The inclines for a hospital of this size are a success, and, while the principle is not new, its application in this instance will so popularize it that every complete book on hospital construction hereafter will contain a description of this feature.

The operating-rooms on the fourth floor, with their modern appointments, are practically above fly and dust line, and are completely separated from the other parts of the hospital, which prevents confusion and promotes the comfort of patient and friends. These rooms can be mechanically cleansed and flooded with sunlight. They are supplied with Hartley-Murray-Verdi operating-tables with oil pump lift and other accessories. The Bartlett Noshade Lites are supplemented by others, and, in the event the city current is temporarily cut off, a large storage battery, capable of furnishing seven-hour service to each room, is installed. This valuable double

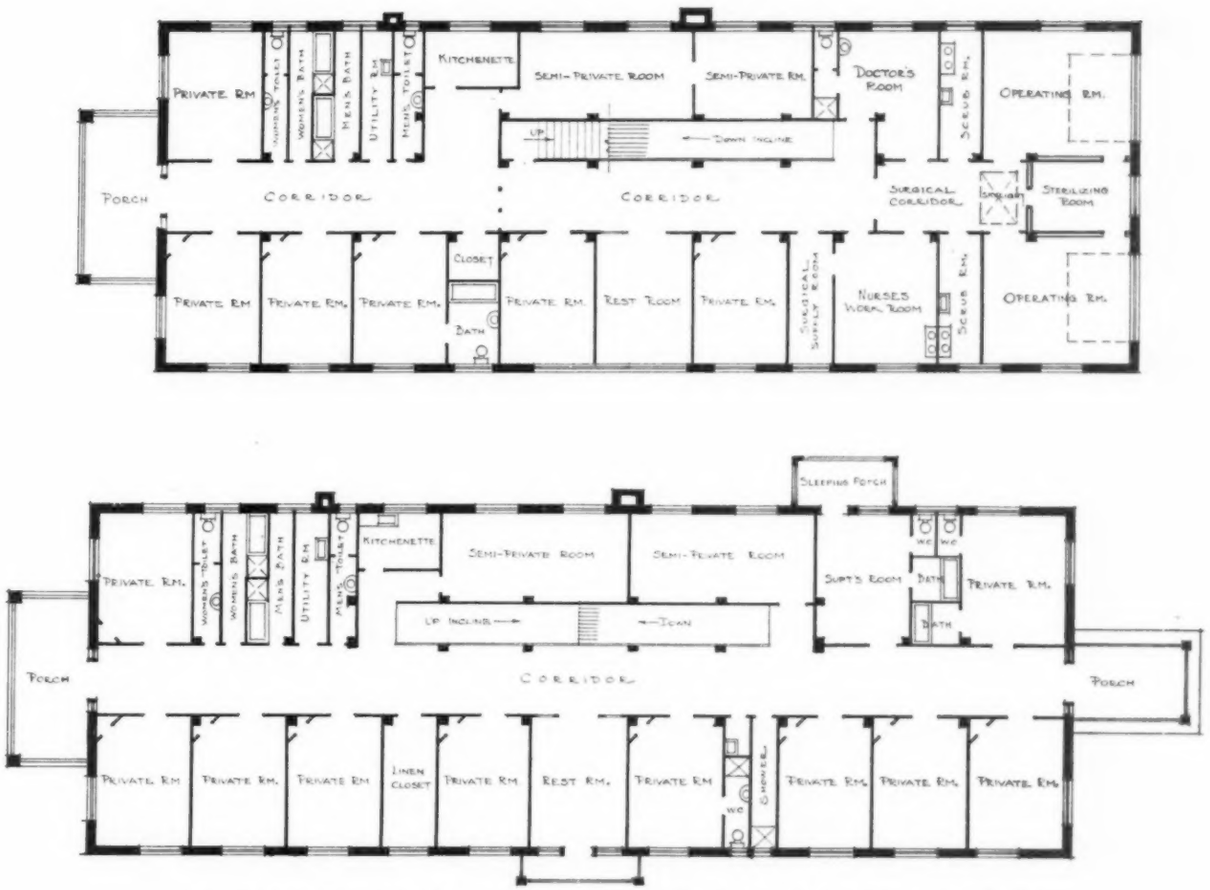


Fig. 3. Second-floor and third-floor plans of Oklahoma Hospital. Each floor is complete in itself.

service is a new feature used first by the Oklahoma Hospital.

One operating-room is finished in standard white. The other is finished in green because I believe that it has a more tranquilizing effect on the patient and is easier on the operator's eyes. I also use black operating-room sheets and towels because the black more sharply defines by contrast the field of operation and is less irritating to eyes.

Fig. 4. Part of corridor and the inclines. The inclines work any time of day or night, can be kept clean, and never get out of order. The side lights on incline permit ventilation when needed in semiprivate rooms. The ceiling lights are separately wired, so one or all may be used at once. The silent signal over the door shows red through the transom to the occupant of bed, to the nurse in the hall, and at the switchboard in the office. This arrangement does away with one fixture by side of bed and enables the office to check time and place of service if necessary.

I believe that a properly appointed and regulated hospital is the medical and surgical clearing-house of the community and ought to meet the exacting demands of a discriminating people who seek service and appreciate the modern measures available, not only to study disease and injuries and to make correct diagnoses, but also to treat them scientifically.

Construction on the Oklahoma Hospital was begun in February, 1916, and completed and occupied August 20, 1916. The organization consists of myself as president and Miss H. C. C. Ziegler as superintendent, who has been associated with me in such capacity for over ten years. She has two graduate assistants, one graduate operating-room nurse, seventeen pupil nurses, a cashier and book-keeper, housekeeper, janitors and two cooks and one laundress.

The hospital at present maintains an open staff. The x-ray and clinical pathological laboratory are

at present maintained by cooperation with visiting doctors and the superintendent.

Every thinking person must recognize that the particular training-ground for the physician and surgeon is the hospital. The intelligent care of sick people is a community problem and obligation, and with proper guidance and cooperation may be satisfactorily solved in any city where enough unselfish and unprejudiced people will join in the work.

Dr. S. Weir Mitchell says: "Modern medicine in its most successful aspect is only made possible by that partnership between educated nurses and educated doctors which insures the fullest and most competent use of the opportunities with which science has endowed art."

Fig. 5. A little team-work; following the doctor's orders to get patient to bed at once, give some medicine, and get a quick report and record of her condition. Observe also the simple and serviceable shade, adjustable from top or bottom, the bed which may be lowered or elevated at either end, the movable light with adjustable shade, which may be used for reading, examining patient, or even placed under bed out of sight. The patient has hold of silent signal.

IMMANUEL DEACONESS SURGICAL HOSPITAL, OMAHA, NEB.

One of the Hospitals Under the Control of the Augustana Synod—Set on a Hill, It Needs No Ventilating Fan

By OLOF Z. CERVIN, Architect, Rock Island, Ill.

THE Immanuel Deaconess Surgical Hospital was completed in 1909. Up to that time medical and surgical cases were in one building, erected about thirty years ago. As it is intended to continue with buildings on a group plan, it was necessary to conform as much as possible to the design of the first structure, with its towers, bays, and turrets, and fourteen feet high ceilings. The new surgical wing was modernized as much as possible, and the stories reduced by raising the first floor and lowering the cornice, but not enough to disturb the eye, as the buildings are separated about one hundred feet, and the ground slopes away from the new building.

The construction is reinforced concrete and tile floors, vitrified brick exterior, and slate roof. Partitions are two-inch solid plaster. Floors of halls, kitchen, sanitaries, and operating department are terrazzo. Maple floors are used in the rooms and wards.

The sanitaries contain wash basin, bath tub, water closets, nurses' slop sink, and laundry tray, divided off by low partitions. In late hospitals under the control of the same synod (the Augustana) and designed by the same architect, these compartments have been expanded and separate rooms used for men's and women's toilets, for the bath tub, and for the nurses' special fixtures, making four rooms, to the comfort and convenience of all. Another improvement is in the arrangement

of elevator and stairs, which here are placed in the open, matching the old medical building. These are now set back from the hall and closed off by doors.

Fig. 1. Immanuel Deaconess Hospital, Omaha, Neb. General view.

Sun porches are provided to the south, but are not yet glazed in.

A large ventilator on the roof connects with all

Fig. 2. Immanuel Deaconess Hospital, Omaha, Neb. First floor plan.

1. Entrance porch.
2. Public hall.
3. Bookkeeper.
4. Vault.
5. Superintendent.
6. Doctors' consultation room.
7. Interns.
8. Intern.
9. Children's ward (7 beds).
10. Sun room.
11. North porch.
12. Ward (4 beds).
13. Morgue.
14. Drug room.
15. Sanitary.
16. Patients' hall.
17. Clothes chute.
18. Linen closet.
19. Reception room.
20. Coal room.
21. Kitchen.
22. Cold pantry.
23. Refrigerator.
24. Warm pantry.
25. Supplies.
26. Help's dining room.
27. Doctors' dining room.
28. Service hall.
29. Elevator.

rooms by a system of ducts. As the institution is on one of Omaha's highest and breeziest bluffs, this has proved sufficient without a fan. All provisions were made for installing same, but it was found unnecessary.

Fig. 3. Immanuel Deaconess Hospital, Omaha, Neb. Second floor plan.

1. Sun porch.
2. Hall.
3. Ward (7 beds).
4. Private room.
5. Private room.
6. Private room.
7. Ward (5 beds).
8. North porch.
9. Ward (6 beds).
10. Private room.
11. Sanitary.
12. Lockers for patients.
13. Nurses' station.
14. Linen closet.
15. Private room.
16. Ward (2 beds).
17. Sanitary.
18. Diet kitchen.
19. Fire escape.
20. Private room.
21. Private room.
22. Ward (2 beds).
23. Elevator.

Fig. 4. Immanuel Deaconess Hospital, Omaha, Neb. Third floor plan.

1. Open porch.
2. Hall.
3. Ward (7 beds).
4. Private room.
5. Ward (2 beds).
6. Private room.
7. Etherizing room.
8. Doctors' dressing room.
9. Main operating room.
10. Sterilization room.
11. Sisters' room.
12. Small operating room.
13. Eye, ear, nose, and throat.
14. Sanitary.
15. Clothes chute.
16. Lockers.
17. Linen room.
18. Private room.
19. Ward (3 beds).
20. Ward (2 beds).
21. Diet kitchen.
22. Fire escape.
23. Private room.
24. Private room.
25. Ward (2 beds).
26. Elevator.

Heating is by the Moline system of vapor heating. The boiler plant is located on the other side of the street, to take care of all buildings.

There are sixty-one beds and two rooms for in-

terns. Some rooms look small on the plans, and are small as most hospitals go, but the demand for them has been great. Each room has an air exhaust duct.

The operating room has no skylight. The large window to the north was extended up and the ceiling raised and inclined back, as shown on the third-floor plan. The resulting light has given the best satisfaction to the surgeons. The window is double glazed in copper sash and frame.

The nurses' station is in the angle of the hall. Silent call was installed throughout.

The pathological laboratory is located in west end of third story.

STANDARDIZATION OF HOSPITALS—COMMENT ON THE CLASSIFICATION*

Leading Thinkers in the Hospital World Commend Plan to Study Standards—Some Think the Classification Offered Should Be Further Elaborated—Suggestions for Improvements

By JOHN A. HORNSBY, M. D., Chicago, with the Collaboration of Various Expert Specialists

IT was the intention to follow our introductory paper last month into the actual business of classification of the hospitals, with the equipment, facilities and personnel developed for each class, but it has been deemed desirable to set out upon our discussion in another way.

When the classification as published last month was devised, a copy was sent to a number of the foremost hospital people in the country, with the request that they comment on the proposed classification in order that we might start off with the feeling that the classification which we were about to study had already the approval or at least the favorable comment of the thinkers in the profession.

The responses to the letter that accompanied the classification have been so general and generous that we feel we would be making a mistake not to set this comment before the readers of THE MODERN HOSPITAL in order that they too might approach the subject with mature deliberation. This month, therefore, we are contenting ourselves with the publication of as many letters as the space will permit; next month we shall take up the University or School Hospitals and we shall follow our paper with other comment.

FROM W. C. BRAISTED, SURGEON GENERAL U. S. NAVY

Your plan to classify the hospitals of this country appeals to me very strongly. It is a huge undertaking, but will inevitably do a great deal of good. The classification will not only be a great convenience, but will tend to increase efficiency, as was the case in the classification of our medical schools.

I quite agree with you that the basis of rating is not size, but adequacy. A small-town hospital with all modern improvements might easily deserve a higher mark than a larger one in a big center, though its medical and surgical staff were not composed of famous men, provided its equipment and administration were of a high order.

Perhaps, in addition to number of beds, you could include such details as:

Number of operating rooms
X-ray room—permanent operator
Laboratory—permanent staff
Sanitation
- garbage disposal
- screening—complete
- heating
- lighting
- ventilation
- water supply

Fire protection
Capacity for expansion
- Temporary—increase of beds
- Permanent—adding pavilions

Such a basis of classification would go far toward educating the country and small-town population in the matter of modern hospital requirements, and so would do invaluable missionary work, for it is the public that pays for hospitals and needs instruction as to what constitutes a good one.

FROM A. H. GLENNON, ACTING SURGEON GENERAL, PUBLIC HEALTH SERVICE

The standardization of hospitals is greatly needed. It is to be hoped that the day is not far distant when we can make arrangements to collect uniform statistical data of hospitals and allied institutions, both morbidity data and administrative data.

The classification you have made looks to me to be very satisfactory. In the item "County Farms and Poor Houses," I wondered whether you included the entire institution or simply referred to hospitals connected with such institutions. Closely allied, at least for the purpose for which the classification is made, are the penal institutions. I am not sure that you have made provision for the hospitals and hospital facilities of the penal institutions. I think they should be included.

By the item "Infectious Disease Hospitals," I presume you have in mind the ordinary hospital for contagious diseases. I am not sure whether "Infectious Disease" or "Contagious Disease" would be the better term. Many infectious diseases are ordinarily treated in general hospitals. The diseases treated in the hospitals you had in mind are, I think, ordinarily the contagious diseases.

FROM S. S. GOLDWATER, SUPERINTENDENT MOUNT SINAI HOSPITAL, NEW YORK

You have omitted from your list of special hospitals

*This is the second in a series of papers on "Standardization of Hospitals;" next month will appear an article on the University or School Hospitals. Next month, also, names of collaborators will be published.

(perhaps for good and sufficient reasons) the following special classes:

Psychopathic hospitals (in contradistinction to insane asylums)
Neurological hospitals
Hospitals for paralytics
Hospitals for epileptics
Orthopedic hospitals
Hospitals for chronics
Hospitals for inebriates
Hospitals for drug addicts
Hospitals and homes for convalescents
Eye, ear, nose, and throat hospitals
Municipal emergency stations
Hospitals for women
Hospitals for the treatment of diseases of the stomach (rare)

While the lines cross in many instances, hospitals of a distinctive character, belonging in these several groups, can be found in various parts of the country.

FROM HENRY M. HURD, BALTIMORE, MARYLAND

Many thanks for your kind letter with the scheme for a hospital classification. It seems to me very perfect and complete, and I have really no suggestions to make in reference to it beyond the suggestion that perhaps it might be well to differentiate the large hospitals with special endowments, which are able to control their admissions wholly. They may be included in general hospitals, semi-public, but it seems to me they stand on rather a different footing from many of the other public hospitals. I refer to such hospitals as the Massachusetts General Hospital, the Peter Bent Brigham Hospital, the New York Hospital, the Pennsylvania Hospital, Philadelphia, and St. Luke's Hospital, Chicago, and of course many others whose names will occur to you. Most of these are not primary teaching hospitals, nor are they compelled to receive patients. Some of them are wholly charitable; that is to say, they have no private rooms; others have private rooms from which they receive income, and devote a portion of their income to charitable work. I am not quite sure just how to classify them, but it would seem rather desirable to make a special heading of them if you can. The scheme for the papers is admirable, and I hope it may do some good.

FROM JOSEPH B. HOWLAND, ASSISTANT ADMINISTRATOR MASSACHUSETTS GENERAL HOSPITAL, BOSTON

I have yours of the 10th, with tentative classification of hospitals for the purpose of standardization. I have looked over your list carefully and have no suggestions for change. It seems to me that you have grouped these as well as the large variety of hospitals in this country can be grouped under a reasonable number of headings. I might perhaps offer the suggestion that you make a further division of the Children's Hospital into Children's Hospitals and Infants' Hospitals; as in Boston and New York, at least, there are separate institutions for each.

FROM RENWICK R. ROSS, SUPERINTENDENT BUFFALO GENERAL HOSPITAL

I have your letter of recent date containing the classification as suggested by you for hospitals. The only thing that I can suggest in it is that some hospitals would have to be classified under several headings. Yet I do not see how you can well have it otherwise, no matter what classification you adopt; for example, this hospital is a university and teaching hospital. It is also a hospital of 350 beds. This would place it under two headings.

I would suggest the classification be made somewhere for incorporated institutions—that is, institutions conducted under the state laws governing charities in the different states. I would also make a classification for private hospitals, or those which are run by individuals for profit.

FROM THOMAS HOWELL, SUPERINTENDENT THE SOCIETY OF THE NEW YORK HOSPITAL

I think your classification for hospitals for purposes of standardization is a comprehensive one, including about everything in the way of a hospital that there is.

I note that you provide a heading for state hospitals for feeble-minded, blind, deaf and dumb, etc., but do not have a heading for private hospitals for the same class. I do not find that you have included hospitals for chronics and incurables. We have in New York at least two institutions of this class which are entitled to classification.

If some of the private homes for adults and children have hospital facilities it might possibly be well to include them. Convalescent homes are not hospitals, but some of them like to be so regarded, and the number of homes of this description is increasing very rapidly.

FROM FRED T. MURPHY, DEPARTMENT OF SURGERY, WASHINGTON UNIVERSITY MEDICAL SCHOOL, ST. LOUIS

It seems to me that your outline for the study of hospitals is very comprehensive. I should feel, however, that in a survey of the whole hospital situation great care should be taken not to make too great allowances for the small hospitals. By and large, it is in these small hospitals that the majority of patients are treated and it is in them that the younger surgeons do their work.

It has been accepted, I think, without question, that for these small units it was not necessary to provide adequate laboratories, etc. Now, my own feeling would be that it was just as essential that these smaller units be safeguarded as the larger.

Of course in such a survey a sharp distinction will be made between that which is actually practiced and that which is professed. This was especially brought home to me by a visit recently to one of the state institutions in Missouri, where on paper and in the office it seemed as if the best of scientific care was being given to the patients. As a matter of fact, when you actually investigated, you found that practically nothing was being done.

FROM R. O. BEARD, UNIVERSITY OF MINNESOTA MEDICAL SCHOOL

I have your letter enclosing copy of your proposed classification of hospitals. It strikes me very favorably. The only suggestion I would make would be the possible addition under the special hospital group of detention hospitals as adjuncts to state hospitals for the insane.

As I understand it, this is merely a skeleton classification into which you propose to build the data upon which something like standardization may be done. I am very much interested.

Although prevention of sickness is the first aim of infant mortality campaigns, nevertheless there should be hospital accommodations for those cases which cannot be cared for properly at home. As a city grows, a hospital of this sort sooner or later becomes a necessity. In almost any hospital it is possible to turn over to the exclusive use of children some of the beds and facilities so that, in case of emergency, there will be some place where sick babies may be given adequate care.—Kansas State Board of Health.

The MODERN HOSPITAL

Editorial Office . . . . . Conway Building, Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd . . . . . Fidelity Building, Baltimore
Frederic A. Washburn . Mass. General Hospital, Boston
Winford H. Smith . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater . . . . Mt. Sinai Hospital, New York
W. L. Babcock . . . . . Grace Hospital, Detroit
John A. Hornsby . . . . . Conway Building, Chicago

SUBSCRIPTION.

Domestic postage, $3.00. Foreign postage, $3.50 (15 Shillings). Single copies, 35 cents.

Domestic rates include United States, Cuba, Mexico, Porto Rico, Canal Zone, Hawaii, and Philippines.

Contributors, subscribers, and readers will find important information on advertising page 34.

National Organizations and Their Programs

The great value of annual conventions is that they bring people together. Formal papers are necessary pegs on which to hang discussions. It is unfortunate when the pegs cover the whole wall!

Among the innumerable national associations of all kinds in the United States, over forty are entirely, or mainly, concerned with the problems of health or disease. Naturally, these bodies vary in size, in the character of their organization, and in the manner in which their annual conventions are arranged. A member of the American Hospital Association attended the meeting of the American Public Health Association in Cincinnati last autumn, and was much impressed with the manner in which that convention was conducted. This association has a larger total membership than the American Hospital Association, but the number of persons registered at the Cincinnati meeting was no greater than at many recent hospital gatherings. Previous to the public health meeting, the organization had been worked out in a number of sections. Members interested in a particular phase of health work would form a section, with the authorization of the central governing body of the association and under the rules laid down by the by-laws. A standing committee of this section, subject to these rules, would prepare a program for its share in the meeting. At the convention, one general session was held each day, the rule being that no sectional meetings were allowed at the same time as a general session. Of the three daily periods, morning, afternoon, evening, one was always left free for recreation, informal conferences, or visits to points of interest in the locality, and the third period was for sectional meetings, of which from four to seven took place at one time. Such subjects as public health administration, vital statistics, sanitation, public-health laboratory work, etc., were among those on which sections were organized.

As a result of this sectional organization, the visitor to the American Public Health Association found from fifty to over two hundred persons meeting as sections, each forming a group especially interested in the subject under discussion and eager to participate in discussion. Papers were strictly limited as to time, none being allowed to exceed the allotted twenty minutes. Those who had been invited to take part in the discussion and whose names were on the program were given ten minutes, but no more, to speak or read their papers, and informal discussion was limited to five minutes. Extension of time was allowed only by vote of those present. It was a striking fact that the number of those who wished to speak in the informal discussion always appeared greater than could squeeze into the time available. Since public health officers are no more interested in their work than hospital people are in theirs, it was evident that the organization by sections at the American Public Health Association served to bring together people who are keen on a particular subject, and to promote really illuminating and effective expressions of opinion.

In such large national organizations as the Conference of Charities, at which a thousand or more persons may register, or in the American Medical Association, which is still larger, the sectional organization is an essential feature of every convention. Even a much smaller society, such as the National Association for the Study and Prevention of Tuberculosis, has three sections, each with its committee in charge, that works out the sectional program.

The American Hospital Association may well consider the example of these other national bodies. It has had "sections," but no sectional organization. The "small hospital section" and the "large hospital section" have not been organized with standing committees to prepare a program. With the many phases of hospital work —administration, medical organization, equipment, construction, nursing, social service, out-

patient work, etc.—there is endless opportunity for effective sectional organization. The new constitution provided at the last meeting of the American Hospital Association opened the way for this step, and it may be hoped that some substantial beginning will be made this year. A succession of large general gatherings with papers on a variety of subjects seems to elicit a rather languid interest and to forestall discussion, rather than to provoke it. Bringing together like minds in sections, each with a program covering a specific range and prepared by those specially interested in this field, would not interfere with the larger gatherings at the general sessions, but would enhance the professional and social value of the meetings to those who often travel far to attend them.

Diversion Therapy in Sanatoriums

It is a common complaint that patients in tuberculosis hospitals cannot be induced to remain long enough to receive real benefit; and it is the experience of tuberculosis workers that patients go from one to another hospital, remaining only a short time in each. Experts realize this state of things, but dismiss the matter with the feeling that it is due to restlessness induced by the disease, high temperature, fear of death, unhappiness of loved ones at home, and the like.

Any or all the foregoing reasons may add to the disinclination of sanatorium patients to remain, but they are not the primary reasons. The truth is that the deadly dullness, the dreary monotony of patients' lives in nearly all sanatoriums would drive the most optimistic and cheerfully inclined well person into the realm of melancholia or out of the institution.

It is true that the range of occupations and diversions which may be permitted is limited. Some patients can perform light tasks; some can read and write, do fancy work, or play games; and there are some whose temperature keeps them in bed. But all these classes would respond enthusiastically to well-directed efforts to divert, entertain, and occupy their minds and bodies, although they do not know how to find diversion and occupation for themselves.

Why not a director of entertainment, to be paid the salary of one or more of the medical people who usually swarm about sanatoriums with nothing to do? For such an office a versatile, well-educated, widely read, and cheerful woman would be the ideal. She should know a good deal about botany, flowers, trees, shrubs, wild life, birds, and small animals like rabbits and squirrels; she should know about clouds, so that she can talk intelligently about the various kinds. She should know a good deal about the drama, so that she can select suitable little plays for evening entertainment; she should be on rather familiar terms with classic literature, so that she may plan readings suitable for different classes of patients, and with current literature, for purposes of a borrowing library.

No woman is going to measure up to all these requirements, but a well-educated, versatile woman—who wants to—can be trained in a few weeks so that she can always be ahead of her patients, and after a few months of practice on the job, her services should be invaluable and highly paid. This woman would take groups out walking on pleasant days, perhaps two or three different groups classified according to the amount of exercise they may have, and give them most enjoyable and instructive diversion, conversing with them about things they come across on the journey—birds, flowers, trees, clouds, rocks, and a thousand and one other interesting things or things that may be made interesting. On gloomy and rainy days they may have interesting readings, talks about books and book characters, current news and what it means, and an infinite variety of interesting things. In the evenings, those who are permitted to do so can study and rehearse little plays and have an occasional performance, at which all the officers, employees, and patients would be guests.

Some day, some sanatorium administrator who is worried because his patients "will not stay" is going to get a Director of Diversion and Entertainment.

Taste and Refinement in Hospitals

In recognition of the powerful influence of environment, hospital administrators are nowadays thinking about making their institutions attractive to all the senses. They invoke beauty of architecture and decoration to please the eye; harmony of sound, music, and quiet, in which harsh noises are prohibited, to please the ear; flowers and sweet scents (in place of the old-time hospital smells, iodoform and carbolic acid) to please the sense of smell; soft fabrics, blankets, and linens, and smooth, clean furniture, to please the sense of touch; and appetizing foods to please the sense of taste.

But we, as a progressive nation, are developing taste along some lines that have hardly been taken into account by hospital thinkers. A few years ago the "all-white" operating, dressing, and service rooms were regarded as the very last word on asepsis; and we have in mind a few hospitals

in which the "all-white" fad was permitted to rule even in the private rooms, and white metal beds, white enameled dressers and tables, and white linen covers and shades were to be found.

It seems that we have well passed this stage of attractiveness now, and superintendents and trustees of taste and culture are planning for "pretty things" in furniture and accessories. That is why the idea of having well-to-do people of refinement furnish individual rooms has taken so strong a hold on the trained hospital mind.

It is a joy to go into a hospital and find evidences of good taste and refinement on every hand, the private rooms provided with attractive carpets or rugs, the windows tastefully draped and shaded, the furniture in pretty styles and of good material, well treated. And if the rooms are all different in their furnishings, each one striving, as it were, to be more inviting than the others, it gives one the feeling that the creature comforts and the sensibilities of patients, as well as their ailments, are given care and thought.

There is no reason why the wards may not also share in these beneficences. Pretty rugs, large and small, can be disinfected and kept clean; window shades and drapings may be artistic, soft and pleasing; the beds may be in attractive patterns, pleasing polishes, and dainty colorings; and the bed dressings may be kept clean and neat. These things all enter into the therapy of our time, far more than drugs, plasters, and poultices.

May more hospital superintendents find the money to add their share to the new era of good taste and refinement in hospitals!

Hospitals Facing Parks

In the search for pure air, sunshine, trees, flowers, and the other factors which contribute to good health and happiness, many hospital boards have their eyes turned longingly to city sites near or facing public parks. Many hospitals are so located, and no small part of their assets consists of these beneficences of nature.

Unfortunately, this is a selfish world, and, strange as it may seem, there be some people who would withhold from the sick the park privileges vouchsafed to themselves, and some who even go so far as to try to interfere by law with the location of hospitals adjoining parks. The ostensible reason for these protests is that sick people carry contagions and might transmit to the protestants or their children some "dread and loathsome" disease. Another reason occasionally given is that a hospital hurts the value of property in its neighborhood.

Of course, we know that these reasons are worthless; disease is not transmitted when two people pass by each other in the open air; diseases are not air-borne, but are transmitted by direct contact. So far as we know, however, no one proposes to place hospitals for infectious diseases near public parks; as for general hospitals and others devoted to non-infectious diseases, their patients are probably less dangerous to the community than are the passengers that one rubs against in a crowded street-car. The value of adjacent property, moreover, is not depreciated by a modern hospital; on the contrary, usually the hospital is the handsomest structure in the neighborhood, and adds far more to the life and beauty of a community than a church or school or apartment building.

The purpose of this note, however, is to ask superintendents whose hospitals face or adjoin parks to write us a note telling us what the people of the neighborhood think about it. They will be doing a good turn for several hospitals that seem to be in trouble over their building permits. Please do this at once, however briefly.

A Work Therapy Number

Under Hospital, Medical and Special Meetings this month will be found a report of the organization, at a meeting held in Clifton Springs, N. Y., of a national society devoted to occupational therapy. We call attention here to the formation of this new national society because it is one of several indications that the important but too long neglected subject of occupational therapy is at last receiving the serious attention which it deserves. THE MODERN HOSPITAL, as its readers know, has long felt a deep interest in the subject. Among the articles which it has published bearing on the topic are: "Hospital Aid for the Handicapped," by Byam Hollings, April, 1914, p. 232; "The Value of Convalescent Labor in Hospital Work," by Charles F. Sanborn, July, 1914, p. 7; "The Relation of Work to Social Service," by Mary Irving Husted, September, 1914, p. 151; "Occupation for Mental Cases During Institutional Care," by Carl W. Sawyer, August, 1915, p. 85; "Occupation of Patients in State Hospitals for the Insane," by Henry P. Frost, September, 1915; "Home Treatment for the Tuberculous," by Edward Hochhauser, March, 1917, p. 207. Because this subject is one of special importance to those in hospital and other institutional work, we have arranged to devote next month's issue largely to this subject. We have secured several of the papers read at the recent Clifton Springs conference, as well as other interesting and valuable papers by leaders in the

movement. We believe we can safely promise that next month's issue will be worth the attention of all who are interested in this important subject.

Authors Request Aid

The program committee of the American Hospital Association has assigned topics to authors who are particularly qualified to write on them. Many subjects, however, are too broad for any one person's experience, no matter how long and varied, to furnish all the information needed. Perhaps it has not been so generally realized heretofore as it should have been that in the membership of the American Hospital Association there is a vast reservoir of experience only waiting to be tapped. Two authors of papers to be read before the Cleveland meeting are trying to avail themselves, through the medium of questionnaires published in THE MODERN HOSPITAL under Letters to the Editor this month, of this accumulated experience of the hospital world. We hope that their requests may meet with an encouraging response.

Incidentally, we shall be glad to publish at any time questionnaires or requests for the results of experience on any subject of interest to hospital administrators. It is time to establish the habit of discussing these things together, and THE MODERN HOSPITAL will be glad to serve as an open forum for the purpose.

Foreign Exchanges Cut Off by the War

Readers of our Current Hospital Literature Department will notice this month the paucity of abstracts from articles in foreign languages. This is due to the fact that, on account of the war, few foreign exchanges are reaching this country at present except from France and Great Britain. Until the war clouds lift, apparently, we shall have to dispense, in the main, with foreign literature. As a compensation, we shall try to present, both in Current Hospital Literature and elsewhere in THE MODERN HOSPITAL, an even fuller and more interesting selection than ever before of abstracts from the literature of those countries that are in communication with us.

Preparedness Committee Wants Reports

Dr. F. A. Washburn, of the Massachusetts General Hospital and of the Medical Preparedness Committee of the Army, wishes to urge all hospitals that have not already done so to send in the inventory forms that have been sent to them.

Accurate knowledge of conditions in the hospitals of the country must be in the hands of the committee for the use of the War Department, if the campaign for preparedness is to move rapidly, and hospital administrators should do their part by furnishing at once the information asked of them. Please attend to this without delay.

SAN DIEGO CLAIMS FIRST DIAGNOSIS HOSPITAL

Anticipated New Factor in Medical Practice Materializes in California City

Movements toward the establishment of hospitals to be devoted exclusively to diagnosis have been inaugurated in various parts of the country within the last year, a notable instance being the project fathered by the New York Diagnostic Society, which was described in the January number of THE MODERN HOSPITAL. San Diego, Cal., however, appears to be the first city in which such an institution has actually been put into operation. A diagnosis hospital founded by E. W. Scripps, head of the United Press and the Scripps list of newspapers, was opened in San Diego last month. Although of small capacity, it forms the nucleus of an institution which Mr. Scripps proposes to develop at a cost of $250,000.

The hospital is housed in a two and one-half story building, the first floor of which contains the office, reception-room, examining-rooms, laboratory, staff dining-rooms, kitchen, laundry, etc. The second floor contains six beds for patients. The number of beds will be increased as the demand may require.

To provide for persons of moderate means the best facilities for diagnosis that the medical profession can offer is the purpose of the founder. Patients will be admitted only on applications through licensed physicians, and will be sent back to these physicians for treatment. During the first year, only members of families whose total income is not more than $100 a month and single persons whose incomes are $80 or less will be received. Rates for diagnosis will range from $25 down to $10, according to the income.

The staff is composed of specialists in the various branches of medicine, each specialist serving for one month at a time and without pay.

When a patient is brought to the hospital a complete history is taken and the patient is put to bed for at least forty-eight hours, to allow time for examination by a member of the staff representing each group of specialists. The case is then discussed by the staff at a luncheon, to which the patient's physician is invited. In conformity with this plan, a luncheon is served at the hospital daily, except Saturdays and Sundays.

The physician referring the patient for diagnosis receives a written copy of the diagnosis, with suggestions as to the plan of treatment that should be followed, but under no circumstances is the diagnosis given the patient.

By the cooperation of the Kansas State Hospital Association, it is now being arranged that all mothers who are delivered in hospitals shall have the additional advantage of personal instruction in the care of herself and the baby. This includes bathing and dressing the baby, preparation of food and clothing, and the many minor details of care of the after-period which are likely to be neglected and which go so much to make for the comfort and well-being of both mother and child.—Kansas State Board of Health, Child Hygiene Number.

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH.
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

The Relation of the Training School to the Hospital*

BY A. R. WARNER, M. D., Superintendent of Lakeside Hospital, Cleveland.

The relation of the training school to the hospital is today a live subject. We are nearly at the end of the relation, practically universal, with which you are all familiar, and the education of women for the various fields open to nurses is now under active discussion and experiment. Only one point can be said to be certain: the general public demand for nurses for the various fields of nursing work will be answered in some way; the required workers will be produced. The principal point for consideration by hospitals is the determination of ways and means to meet squarely, wisely, and adequately the present conditions which seem to demand recognition by hospitals that, either they must maintain schools on the basis of educational institutions to provide professional and vocational training, or schools of nursing will pass into other management and affiliate only with hospitals for the practical training. The alternative is already before us. The Illinois Training School of Chicago is an independent institution, sending nurses to the Cook County Hospital for their practical work on the basis of affiliation or contract, and there is no reason to allege that this plan has proved a failure. Enlargement of this school on the basis of similar contracts with other hospitals is now contemplated. There are also several training schools really under university management. These schools are all located in university hospitals, and the practical training is given in these hospitals, although the university controls staff appointments and the other educational details, and the university, not the hospital, authorizes the graduation and issues the diplomas. Not only the details, therefore, but also the fundamental bases, of this relation are under discussion, with no decision apparent.

This relation of the past came naturally and easily through common interest and common benefit. With the development of the idea of trained nurses there arose a general active interest in training schools on the part of hospital, which was not always entirely altruistic. Hospitals were at that time just beginning to increase rapidly in number, and the training school solved the problem of providing nursing service on the wards. The type of instruction to nurses was then very largely practical, and knowledge was acquired principally through experience. Vocations for women were then fewer and there was a surplus of applicants to take training, making it almost a pressure on the hospitals to provide facilities for greater numbers of pupils. Hospitals desired training schools and the young women desired nursing training. Under these conditions, hospitals soon found that much of the menial and housekeeping work could be transferred to the pupil nurses. The demand for special nurses appeared, and it became the custom to assign a pupil nurse as special. The pupil nurse then became an asset of the hospital, and the more pupil nurses a hospital could assemble, the greater number could be rented out at considerable profit. At first and in many hospitals, the practice never went beyond the custom of service by pupil nurses as specials for patients in the hospital, where the pupils remained under the direction of their regular supervisors and worked under the usual conditions and methods. With such conditions a certain amount of experience as a special may not have been objectionable, perhaps even beneficial. But there were hospitals that developed a thriving business in renting out pupil nurses as specials for cases outside the hospital.

Until three years ago there were training schools connected with California hospitals in which a large part of the training of the nurse consisted in special duty in homes of the surrounding community. In California this practice, together with the long hours required, became a subject of general criticism. The labor interests took up the matter and the eight-hour employment law for women was made to apply to nurses. This law is very stringent and undoubtedly causes California hospitals much inconvenience. For two years, representatives of California hospitals appeared before the American Hospital Association, relating their difficulties and hoping for action on the part of the American Hospital Association which would help to bring a modification of this law. It was the consensus of opinion in the American Hospital Association, however, that the exploitation of the pupil nurse in California had reached unreasonable limits and that the California hospitals were themselves responsible for the agitation and subsequent legislation. This feeling of the association came out plainly the second year, so that nothing more has been heard from the California hospitals on this subject. By this inaction the American Hospital Association practically committed itself as against the exploitation of the pupil nurse to augment hospital income and against unreasonable hours of service. Training schools were then recognized as schools with responsibilities to the pupils and to the community, not merely subservient departments for producing labor.

Unfortunately, the loading upon pupil nurses of a large amount of housekeeping work and long hours gave nursing training an unenviable and unnecessary reputation as difficult, a strain on vitality and health as well as disagreeable. To this unfavorable report, service as specials probably added but little. Parents are now hesitating to allow their daughters to undertake the arduous task of a nurse's training, yet they have no such feeling toward a college course, business training, or any other educational work. The extensive questionaire sent out and reported by Miss Bennett[1] has demonstrated conclusively that the high-school girl is well posted about the hard and disagreeable features of nursing training. The lack of specific educational facilities in training schools is not a prominent complaint of nurses and the parents of prospective pupils, but the lack of general educational, cultural, and social opportunities is often mentioned. In contrast to this, the purpose of progressive nurses to extend the fields of work open to

*A paper presented to the Cleveland League of Nursing Education March 8, 1917.

[1]Miss Bennett, instructor in chemistry, East High School, Cleveland, sent out and tabulated the results from 1,139 questionaires designed to bring out the attitude of high-school girls toward training schools and nursing education. In order to avoid local conditions, the questionaires were divided among the high-school girls of Minneapolis, Jersey City, La Crosse and Cleveland.

them and the decision of society to use nurses to carry the public health or welfare message to the people have been clearly evident for some time. From these two sources, (1) the general dissatisfaction with the present conditions, and (2) the demand for public health workers, the movement for the educational development of training schools has come and gained some headway. The present situation may be described as a growing demand and a growing scarcity in the supply. Under these conditions, it is not necessary to apologize in saying that something is wrong.

One cannot speak of a vocation as a profession without implying an educational training. The slowness with which hospitals have developed the educational features and all that contributes to professional training in their nursing training schools has not been a help in placing nursing, in the eyes of the public or of the young women selecting a life's work, on a par with teaching or other work requiring even less preparation. There has appeared a practice of paying pupil nurses a monthly stipend or salary in recompense for their labor. Surely this can never add to the educational or professional standing of nursing as a profession. If the shortage of applicants is met by this method, the pupil nurse will be an employee of the hospital, not a student attending a course of instruction. The payment of a salary cannot make training schools more attractive permanently. The more salary paid, the less hospitals will feel the responsibility for maintaining educational features. The permanent way to attract more applicants lies in lines tending to improve the conditions in the training schools both by limiting objectionable features and by adding desirable features to the end that training schools shall be recognized as educational institutions and the training thereof on a par with the education required for other competing vocations. The attitude of young women and their parents toward nursing training will then change, and those who desire to do social work will not regard the training school as an impossible bar to the securing of this part of the preparation. A few hospitals already maintain more educational facilities than others could possibly obtain because of fundamental conditions, those of location, organization, character of work, etc. Formerly training schools may have varied widely, but it was at least possible that the essentials be uniform. It is no longer so. Improvements are probably possible, however, in every school.

It is one of the prominent characteristics of our democratic government that, often imperfectly, yet essentially, the welfare, the needs, and the will of the people are supreme, and the choice of a vocation is a free, uncontrolled choice. In looking into the future of nursing work, one can be certain that the needs and demands of the public for nursing service and the opportunities of the nursing field compared with other fields of work for women will shape almost entirely the destinies of your profession and determine what the ultimate relation of the training school to the hospital shall be. For a moment, then, let us consider the question from the standpoint of the trends now evident in the economic evolution of society, which depend on the nursing profession for the required personnel.

The field of bedside nursing is established. There is a tendency among the wealthy to employ nurses unnecessarily. There is a tendency among the middle classes to recognize the need of nursing service, but, because of the cost of a graduate nurse, to employ a so-called practical nurse even though the difference in cost be small in comparison with the respective capabilities. The nurse with some additional educational experience and training has proved capable in the administration of the smaller hospitals. Certain administrative positions in both the training school and the hospital are filled exclusively with graduates of nursing. Many, if not all, of the various branches of welfare work and social service as well as public health nursing are generally classed as open to nurses. This is to a large extent true, but more true in Cleveland than in any other city of the country. Demands for nurses therefore come from three distinct fields: (1) bedside, (2) administrative, (3) welfare and public health. The young woman who chooses any of these fields must consider the training school in the light of a preparation for the chosen work. The present training schools unquestionably prepare for bedside work, but it cannot be claimed that they prepare fully for either administrative or social work. Additional experience or training is necessary. The effect of this on young women selecting a field for their labor is discouraging; two courses seem too much.

The old controversy of the nurse versus the social worker for social service and general public health and welfare work is to my mind unfortunate and the direct result of this condition. Those electing to do social or welfare work select the shorter course and more direct preparation of the schools of philanthropy. It is my opinion that the highest service in public health and welfare or social work can be rendered by nurses with social training. It seems to me unfortunate that some schools at least do not combine the two lines of preparation and produce nurses fully trained and qualified for this work, and also unfortunate that the credit of such work and the public standing attained by social workers of all kinds cannot thereby accrue to training schools. At present the credit and standing go very largely to the school of philanthropy or course in sociology with which the nurse finishes her preparation for this work. At the present time I know of no preparation for administrative positions in hospitals other than practical experience or Columbia Teachers College. The nurse who gains success in any branch of hospital administration without attending such courses in Columbia is given personal credit for her achievements and the training school from which she graduated is not assumed to have contributed greatly thereto. Many requests are now coming to Lakeside for nurses to fill administrative positions. Our graduates are not prepared for this work without subsequent training. The training school, therefore, cannot have an appreciable or constant supply of candidates for these positions. It will never be possible for all nurses who take up administrative work in hospitals or training schools to have Columbia training. It is not necessary that more than a few instructors be the most highly educated and trained; but it is now advisable that the rank and file of those employed for administrative positions in hospitals receive some training in theoretical administrative work.

If hospitals as such are to develop and maintain training schools capable of fitting students for positions in public health, welfare or administrative lines, it is high time that they were doing it. Schools of philanthropy, sociology, or social service, as they are variously called in the general universities, are now practically a rule. There are, in addition, other courses and schools similar to that organized and maintained by the Visiting Nurse Association of Cleveland, for a time independently and later combined with the School of Applied Social Sciences of Western Reserve University, which was created primarily and wholly to fill the gap between the present nursing education and the requirements for public health work. The conventions, the standings, the associations which determine the accepted preparation for the various fields of

work and the general public attitude and appreciation are now being established. Delay simply means more to be overcome and changed by the hospital training schools if they are to keep control of the training for the various types of nursing work.

To maintain a training school which would fully prepare students for public health, welfare, or administrative work would be an expensive proposition for the hospital, and probably possible only in the case of hospitals situated near universities so that much of the didactic instruction could be given in the university classes. It is probable that in these cases the university would at least determine graduation and issue diplomas, but the practical social service, administrative as well as nursing, would be given in the hospital proper. Practical work in hospital administration can best be given in a hospital for the reason that there the examples and the problems are real and first-hand; elsewhere they must be substitutes, copies, and second-hand. A patient may fail to harbor a pathological lesion, but he cannot fail to be an individual with a past to consider, a present affected in some ways by his hospital residence, and a future not yet fully determined. The combination of medical with social training will prove as efficient as the combination of medical with social philanthropy. It is probable that separate courses would be required to prepare for the administrative and for the public health work. The proper length of time required for either of these courses would necessarily be determined by results.

For the few institutions to undertake instruction on this scale would be a direct benefit to smaller institutions. It would not be necessary for all the training schools to organize on these lines, and a small hospital could not wisely undertake to finance such a school. It is probable that the training schools of small and large hospitals, not so situated as to work out university affiliation easily, would continue to maintain training schools of the present type. The benefit of these institutions would come from two factors. The hospitals with university affiliation and training schools preparing for other lines of work would no longer be in direct competition with the hospitals maintaining training schools of the present type. No argument is necessary as to the importance of training nurses for bedside work, and it is my opinion that it may properly be assumed that the others without university affiliation, even the smaller hospitals, can train nurses for this work equal to any. A second advantage to hospitals making no change would come from the fact that the training of nurses would remain definitely associated with hospitals, and the obligation to run a training school to supply nurses for the community would be recognized by the trustees of every hospital. If the training of nurses becomes dissociated from hospital organization, independent schools like the one in Chicago, which will operate to even better advantage with large numbers of pupils, will increase in number. It is likely that the practical work of all near-by hospitals would be absorbed by these schools and that, with the present tendency to cut down on the practical work of training, the combined hospitals of cities would provide the practical work for a very large number of pupils. If such schools become generally accepted, the training schools of hospitals in smaller cities and towns would find it very difficult to compete, not in the matter of giving an equal training, but in the minds of applicants desiring a training in nursing. It would be most unfortunate for these communities if the local training schools were to be discontinued.

The organization of the nursing school at the Cincinnati General Hospital is unique among training schools of the country. This school has "university affiliation" so called, but practically the school is run by the university. The governing body of the school is composed of university faculty members and the superintendent of the hospital. Graduation is determined and diplomas given by the university for the three-year course of straight nursing, which may be compared directly with the corresponding course at Lakeside and other hospitals. For the five-year course, which is made up of two years' university work, taken first, and then three years' nursing work, the degree B. S. is given, together with the diploma in nursing. It is to be noted, however, that even this five-year course does not prepare for either administrative or social work. This school also maintains a one-year course for sick-room "attendants," as they are called. The probation period and other time are so arranged that pupils may leave at the end of the year with this much training for bedside nursing, or, if otherwise qualified, they may continue in the full course or later return to the full course, receiving credit for the year's work. These women, whether qualified by preliminary education for the full nursing course or not—and women not qualified by preliminary education are accepted in the short course—are a marked improvement over the practical nurse of this city who has either no training at all or a correspondence school course. They do nursing for practically the same class of people, and the earnings are probably about the same.

The present situation is that, notwithstanding the various organizations and affiliations which have appeared, there is no training school in the country preparing directly for administrative or public health and social work. For the few training schools which are so situated as to have university affiliation and which can command the necessary financial backing to support training schools to prepare women directly and fully for these fields of work is certainly a reasonable organization and one which can claim many points in efficiency. For these few schools so to organize and thereby hold the training of all kinds of nurses as the function of hospitals, even though it be not desirable to train all kinds in the same school, would be of direct benefit to all training schools, wherever situated. Only one point remains to be discussed, and that point will always be unpleasant to present-day nurses. It is entirely possible that the length of the full course to prepare for the various fields of nursing may vary, and it may be difficult to devise satisfactory designations for the various types of schools and graduates. It is possible that a hospital may decide that its greatest opportunities for good lies in the way of maintaining a training school to provide nurses for the sick of the surrounding community; it may be that that hospital will decide, quite wisely, that the community will be better off with the services of two two-year trained nurses than with one three-year trained nurse. The elimination of the untrained woman who makes nursing a vocation is the essential. No one can foreteH the details of future changes to accomplish this end.

You may have expected that the relation of the hospital to the training school would be discussed by me with a certain definiteness as to detail, but at present this relation is not a definite thing. The object of this paper is to bring before you the present indefiniteness and state of transition of this subject.

For it may safely be said, not that the habit of ready and correct observation will by itself make us useful nurses, but that without it we shall be useless with all our devotion.—Florence Nightingale, "Notes on Nursing."

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

The annual meeting of the Hotel Men's Association of Ohio was held in Columbus in December. Miss Edna White, head of the Home Economics Department of the University of Ohio, discussed at this meeting "Home Economics in Relation to Hotel Problems. In the January number of the *Hotel Monthly*, a report of this meeting speaks of Miss White's paper as being "what was generally referred to as the most important address of the meeting."

We have been permitted to give this paper to our readers; we are sure that all who are interested in the kitchens of hospitals or other institutions can apply many of Miss White's suggestions about hotel kitchens to their own problems.

Especially would we emphasize the first few paragraphs, which treat of the application of scientific principles to commercial food problems, the need of systematic attention to these subjects, cooperation of the people engaged in the business, and the fundamentals necessary to success.

The need of educating the patrons of the hospital is just as great as is that of educating patrons of a hotel. Some of our readers may recall a statement which appeared in THE MODERN HOSPITAL more than a year ago to this effect: that the serving of poorly selected menus and improperly cooked food in the majority of our hotels and restaurants furnished the hospitals with many of their patients. It is true that the public has accepted and now demands highly seasoned dishes, rich sauces, unduly large quantities of meat, and many other things that will destroy the digestive apparatus of one who has acquired these habits. Not only are these things being demanded in the hotels, but also we frequently have patients in the hospital who think they are abused if they cannot be served with the kind of food for which they have cultivated a liking and which they are able to get in public eating-places.

"The managers of hotels, as a rule, pay little attention to the kitchen because they know little about it." Would not Miss White's statement apply equally well if she were to substitute the word "hospital" for "hotel"?

The Dietitians of Cleveland

The dietitians of Cleveland have continued their monthly meetings throughout the winter. In February they met at Mount Sinai Hospital and listened to a very interesting talk given by Miss Florence Le Ganke, of Woman's College, Western Reserve University. She told of many valuable things found to be true in regard to canned goods, the percentage of solid material and of water in many of the various brands, the cost per serving, and many other points that not all of us have found out for ourselves. Their system of keeping records of supplies was also of great interest.

In March the meeting at Lakeside was addressed by Dr. H. Feil. He talked about the more prevalent diseases of metabolism and the decided changes in the method of their treatment within the past few years, giving reasons for changes and theories advocated in many instances. Dr. Feil made some forceful suggestions in regard to the need for cooperation between the physician and dietitian, and some of the things a dietitian could do to help bring about this cooperation.

This seems to have been a general moving session for the dietitians of Cleveland. Practically every dietitian in the city except those at Lakeside Hospital has changed locations since the first of February. Miss Mary Moon, who was at St. Luke's Hospital, has been succeeded by Miss May Miller; Miss Miller came from Grant Hospital at Columbus, Ohio, to St. Luke's. Miss Marguerite Deaver, formerly at Christ Hospital in Cincinnati, takes the position just vacated by Miss Margaret Endress at Mount Sinai Hospital, the new Jewish hospital of Cleveland. Miss Bartsch is taking a few weeks' rest since giving up the work at City Hospital preparatory to taking up the work at the new Lakewood Hospital the first of May. Miss Shattuck assumes charge of the dietary department at the City Hospital. Miss Mateer is leaving the Contagious Hospital, and Miss Zorn will leave the Lutheran Hospital this month.

Home Economics in Relation to Hotel Problems*

BY EDNA N. WHITE, head of Department of Home Economics, Ohio State University, Columbus, Ohio.

The problem of high food prices facing hotel men is in many ways allied to the housekeeper's problem. As home economics teachers, we have been studying the problem in order to be of assistance to housewives, and, while we have not had the commercial side in the foreground, we feel that we are able to make some contributions that may prove suggestive at least.

The application of scientific principles to commercial food problems has received little attention either from hotel men or from workers in home economics, probably because there has been little recognition of the need of such application. The attitude is not unlike that taken a decade ago by many people toward systematic study of home economics problems, when it was pretty generally believed that the mother's and grandmother's knowledge of food was supreme. But the rapidly increasing number of students in these home economics courses and the large expenditure of money by both federal and state agencies are indicative of the change in attitude toward the study of the household. Until hotel men themselves recognize the need of systematic study and cooperation, very little can be accomplished. No outside agency can solve the problems of any group without cooperation and assistance from the people actively engaged in the business.

A few isolated experiments can be pointed out in which scientifically trained women have undertaken the feeding of large numbers and have possessed financial ability enough to make the experiment successful. For example, Battle Creek, Chicago University, Minneapolis Hotel, and Lake Placid Club illustrate each a different type of commercial undertaking.

*Read at the annual meeting of the Hotel Men's Association of Ohio, Columbus, Ohio.

In each of the cases cited the women had executive ability, and they were given a free hand. It is folly to expect an inexperienced woman, no matter how well trained, to cope with the complicated difficulties that arise in the ordinary hotel. It is just as foolish to expect an average man, inexperienced in selecting and preparing food, to deal successfully with the food problem, and I think many of you will bear witness that that part of your business has not been successfully handled either from a financial point of view or from the point of view of giving well-prepared food to your patrons. The financial test is the test ordinarily applied to problems of this kind, but I am not sure that it is the only method of measurement that should be applied. Satisfaction to your customers might be considered another test. I do not believe that most hotel customers would be willing to say that the *best* hotels are equal to the *best* homes (of course only like things must be compared), so perhaps in this test the results do not measure up to the possibilities.

The cases which I have cited of scientifically managed institutional problems that are successful apparently owe their success to four fundamental principles: first, to the change in the type of meals offered; second, to the elimination of waste to a greater or lesser extent; third, to the carrying out of sanitary laws and regulations; and lastly, to accurate records.

For many years hotel men have been spending their energy in educating their public to make the wrong kind of demands. They have vied with one another in offering inducements to their customers to order lavishly of expensive materials until the situation has become ruinous. In a recent discussion by Dr. Langworthy, government food expert, on selection of diets, meals were divided into the hotel type and the family type. The first is characterized by the large proportion of meat and the latter by the large proportion of fruit and vegetables. Aside from the question of relative expense, the question of personal welfare would lead to the selection of the latter type. But for years all hotel menus have been built on this idea of making meat the important item, the other things being merely incidental. Since fruits and vegetables are considered merely incidental, little attention is given to their preparation, and in consequence it has become proverbial that in the ordinary hotel the vegetables are almost uneatable.

Now, it will be no small feat to reeducate your public, but I venture to predict that it will have to be done. That it can be done is shown by the greatly decreased consumption of meat in the ordinary home, due undoubtedly to the agitation by nutrition experts against the excessive amount of meat in the ordinary American dietary.

Anyone who has ever visited Battle Creek can testify to the great interest taken by their guests in selecting their diet according to the suggestions offered by their dietitians: Guests of this institution seem to regard this unique method as some new and interesting game which they are eager to learn. One of the northern railroads offers a menu each day which they advertise as well balanced, and the dining-car directors have testified to its popularity with the public.

You may ask what the desirability of this would be from your standpoint. First of all, it would cut down decidedly the large servings of meat, which is, as you know, one of the most expensive items in the food budget. It would mean the substitution of larger amounts of vegetables, a much cheaper type of food material, and it would also result in greater satisfaction to your patrons in the long run, because a better-balanced dietary makes for health and well-being. Nutrition experts are finding that, in digestion, meats produce substances that need to be counteracted by mineral salts found in fruits and vegetables. Disregard of this is likely to lead to digestive disturbances if long continued. Has it ever occurred to you that perhaps some of your difficulties with cranky patrons may be due to an unbalanced diet?

But this type of dietary will never be satisfactory or popular until your cooks learn to prepare their vegetables simply and appetizingly. In most cases vegetables are regarded as such an unimportant part of the menu that little attention is given them. In the ordinary hotel one hesitates to order vegetables because they are rarely well prepared. The hotel that makes a point of having good vegetables will find little difficulty in disposing of them.

The question of waste and graft of employees is a difficult one to handle. Waste occurs in many ways. Too large servings, the offering of too great a variety on any one menu and the consequent spoiling of food, the loss through careless handling, and the loss through insanitary conditions—all conspire to raise this item to an unbelievable proportion. We have studied homes enough to know that the waste varies all the way from practically nothing to 20 percent. I doubt if even the latter figure will cover the waste in many hotels. Would not the reduction of this item to a negligible quantity, in many cases, make the difference between profit and loss in your venture?

Another consideration, namely, the question of sanitation, is one of the problems most needing your attention. How many of you would be willing to have your patrons sit in a corner of your kitchen for a day to pass on the sanitary practices and conditions of your kitchens? I suggest that you try it yourselves.

Do you realize that one of the greatest differences in the taste of food prepared in the *best* homes and in your hotels is due to just this, namely, the delicate flavor of the food material is spoiled either because the utensils are not immaculate or because the food itself has been kept so long that it is not in prime condition? You would not find it necessary to use so many highly flavored and expensive sauces if your foods were carefully prepared. I recognize that it costs money to be clean, but I think it has not always been clearly understood that dirt also brings losses. Wherever vermin abounds, food standards are low, and the service problem is complicated by the use of various devices to cover up undesirable flavor in the food.

As a whole, the policy of hotel tables has been largely determined by the part of its public that indulges in loud-voiced complaints. There is, in addition to this patronage, a large proportion of quiet people who are not complainers and they quietly go to simpler places whenever possible. A study of the places that have been conspicuous successes from a financial point of view is rather illuminating. In very few instances have they been places where high prices and elaborate service prevailed. Simple dishes at moderate prices bring numbers, thus reducing relatively the cost of operation and service. Many of these places have departments where surplus prepared food is sold in order to avoid the deterioration due to carrying food materials over. This plan has been successfully worked out in one hotel of which I know.

And, finally, in order to determine possible leaks, a system of careful accounting is necessary which must be carried on in the kitchen and not in the front office. Unless weights and measures of incoming goods are carefully checked, as well as servings of prepared foods, graft insidiously creeps in and profits disappear.

Back of all these questions which I have been discussing there is one factor not yet mentioned. That is the type of person who is finally responsible for food preparation. There has been entirely too much of a tendency to relegate it to unintelligent people, whereas it is such a complicated problem from the point of view both of selection and of preparation that it requires most intelligent consideration. The small hotels often cannot pay enough to get good help, and, even if they did, it is not easily found. The large hotels often offer such undesirable places in which to work that skilled and intelligent workers avoid entering the field.

The managers of hotels, as a rule, pay little attention to the kitchen because they know little about it. They labor under the delusion that the chef knows all about that. Now I have faith to believe that many of the conditions I have outlined would improve, if not entirely disappear, if the hotel men themselves would study their problems instead of leaving them to their employees. If they would study some of the principles underlying rational selection and preparation of food and then see that these were carried out, and at the same time work at educating their public, I think the food side of the hotel problem would soon be revolutionized.

As students of food problems in general, we offer our cooperation and assistance in helping you to solve your problems. We could suggest some principles that govern the planning of well-selected menus; we have studied some problems in selection and buying of food; and we have studied the problems of preparation and reduction of cost of time, money and labor. We know some things about conservation and preservation of food supplied.

If these suggestions were interpreted in the light of your experience, I believe they would be helpful, but I wish to emphasize once more that if your problem is to be successfully worked out, it must be done through cooperation.

The New Pure-Food Catsup: Or, When Is a Chemical Not a Chemical?

BY DR. J. A. WESENER, of The Columbus Laboratories, Chicago.

[Concluded from the April issue.]

The antiseptic properties of essential oils are thoroughly recognized by the medical profession and have been used by physicians in the treatment of diseases, especially in those cases in which it is desired to check fermentation, as in cases of flatulency. The essential oils of cloves and allspice contain large quantities of eugenol, and the United States Pharmacopeia states that the essential oil of cloves must contain not less than 80 percent, and allspice not less than 65 percent, of this body. Eugenol, according to the United States Pharmacopeia, is an unsaturated aromatic phenol obtained from oil of cloves and other sources. It is a well-recognized antiseptic, and the United States Dispensatory states that it probably resembles carbolic acid in its physiologic action. Some authorities have gone so far as to assert that eugenol is a more powerful antiseptic than carbolic acid.

Oil of cinnamon contains much cinnamic aldehyd and may contain cinnamic acid. Cinnamic aldehyd is readily oxidized to cinnamic acid on exposure to air, a condition which very nearly always occurs when a bottle of catsup is opened and kept in the household. Cinnamic acid was at one time used largely in the treatment of tuberculosis. It is well known that the chemical formula of cinnamic acid is closely related to that of benzoic acid, and cinnamic acid is prepared synthetically from benzoic aldehyd. Decomposition products of these two substances in the body are known to be practically identical, and both produce hippuric acid. In addition to this, it has been found that cinnamic acid has marked bactericidal properties, especially when used in connection with certain fruit acids, as tartaric acid. Powdered capsicum and fluidextract of capsicum are powerful irritants, and are always taken in very small doses.

It will be seen from the chemistry, as I have outlined it here, that spices, their essential oils and other preparations from them, vinegar, or the acid which it contains, which is now the one always specified in the Pharmacopeia for making medicinal preparations containing acetic acid, are all properly classed as chemicals, and the active principle of each bears a definite chemical formula. If there were in nature substances from which benzoic acid could be obtained in sufficient quantity to be used in the preparation of catsup, it could as well be added in this form as in the form of the refined product commonly obtained in the markets. The wide distribution of benzoic acid in foodstuffs and in the animal body is well established. It is found as benzoic acid and in the form of derivatives. In the vegetable kingdom, the family of the palms produces a natural exudation known as dragon's blood, which is similar to the gum obtained from the benzoin tree. The family of grasses also contains this acid or its representatives. Benzoic acid has been identified in sweet vernal grass and has been found in the meadow soft grass. It is present in what the Germans call the *Waldmeister*, a plant which is used in the flavoring of certain beverages in the old country. It is found in the congener of our cranberry, the German *Preisselbeere*, which is used extensively as a relish in Germany. The *Preisselbeere*, like the American cranberry, has a capacity for remaining in good condition for a relatively long time. Naegle was the first to call attention to the antiseptic properties of the substance contained in the *Preisselbeere*. The American cranberry contains of benzoic acid, according to W. D. Bigelow of the United States Department of Agriculture, between 210 and 430 mg. in 1 kg., or a trifle less than what is permitted in the preparation of catsup. It is also found in sweet clover and in the fruit known as St. John's bread, which is occasionally eaten by children in this country, but which serves as a more important article of diet in some oriental countries.

Cranberry sauce, which is the side dish at all Thanksgiving Day dinners and is extensively used at other times of the year, is especially rich in benzoic acid. We consume considerably more benzoic acid at one meal, when partaking of cranberry sauce, than we would obtain from the taking of catsup, as catsup is usually eaten. It matters not what we eat, there are always present products which are changed into benzoic acid, and during the twenty-four hours probably 1 to 10 grains of benzoic acid is produced in the small intestine and is derived directly from the food which is consumed. The benzoic acid thus produced is dissolved and carried through the tissues of the body, finally reaching the kidney and eliminated as hippuric acid. The urine from the grass-eating animals is very rich in hippuric acid, whereas that of man is rich in urea. On account of the wide distribution of benzoic acid in both the vegetable and the animal kingdom, it seems the height of absurdity to say that 0.05 to 0.1 percent of benzoic acid when added to a product is poisonous because man in that case did the adding, whereas, on the other hand, if the benzoic acid or its derivatives exist naturally in the foodstuff, it is then considered harmless and the product in which it is eaten perfectly wholesome.

Catsup preserved by benzoic acid usually contains much less spice and vinegar, is far more wholesome and better for the well-being of man than the catsup made in the old-fashioned way, which was exceedingly spicy, or the new pure-food catsup of today, which is preserved either by an excess of spices and vinegar or by the use of essential oils, vinegar, and fluidextract of capsicum. For my part, I would rather drink a pint of sweet catsup preserved by benzoic acid than I would two ounces of the so-called pure-food catsup, and I am certain that if any disagreeable disturbances were manifested, it would be due to the malic acid naturally present in the tomato, and not to any benzoate. On the other hand, I am quite certain that the dose of the preservatives in the two ounces of the pure-food catsup would produce more marked physiologic disturbances than would the benzoate which would be obtained from the pint of sweet catsup. These are all chemicals, no matter whether we eat the chemical in the form of powdered cloves, cinnamon, capsicum, and vinegar, or in the form of chemically purified products obtained from these. The only difference is that one is the crude and the other is the refined. Unfortunately, it is this latter fact which the poor buncoed American public has not been made to understand by those who have had selfish motives. I might add that this buncombe has extended even to our own medical profession, which recently condemned sodium benzoate and other preservatives in foodstuffs when there were probably not more than one or two in the entire assembly who understood the purport of the resolution which they were passing, and this, too, in the face of the findings of the Referee Board, composed of some of the most able scientists in the country, who had been selected for their special qualifications to pass on this subject and who had reported, as the result of careful investigations, that they found no harmful effect to come from the use of sodium benzoate, even in large doses far in excess of any quantity that would ever be used in the preparation of food.

The report of the Referee Board was accepted and endorsed by the National Food and Dairy Commissioners, who were in convention in Denver, August 24, 1909. The only condition which the opponents to the use of benzoic acid are still upholding, now that they have given up the claim of deleterious effect, is that by the use of this product inferiority can be concealed and thereby deception practiced. Now, as a matter of fact, just the opposite is true. Sodium benzoate is an odorless and practically tasteless compound. I have made many experiments in the preservation of tomato pulp of all kinds, and have found that rotten pulp can be preserved much more readily by the use of essential oils, spices, and vinegar than by benzoic acid; that the benzoic acid will not cover up any of the odors produced from the decaying material, nor will it in any way change the flavor. On the other hand, it is quite easy to disguise the flavor and odor of decaying tomatoes when the essential oils, spices, and vinegar are properly used.

I have already stated that the benzoic acid catsup retains the delicate tomato flavor, whereas the essential oil and the fluidextract of capsicum catsup is mostly a flavor of spices and sour. Therefore we see that benzoate will never disguise inferiority, whereas, by the old-fashioned way, as mother used to make it, or by the more refined way in which the active principles are used, inferiority can be easily covered up.

Professor Long also investigated this question as to whether or not inferiority could be disguised by the use of benzoic acid, and he found that this could not be done, but when working on the same rotten tomatoes and using vinegar and spices, he had no difficulty in disguising the inferiority. He says:

"Some of this was preserved with vinegar and spices, some with benzoic acid, and some was left unmixed. The odor and taste of the last was bad; that with the benzoate essentially the same, while with the vinegar and spices a fair grade of commercial catsup was secured. A worse lot of raw material could not be imagined, yet the inferiority in the one batch of product was completely concealed by the use of the vinegar and spices, and this is a perfectly logical result."

In summing up this paper I wish to emphasize the following facts:

1. Benzoate and benzoic acid are medicinally less active than the other substances used in the preservation of food, and the benzoate is less active than the preservatives now used in making the pure-food catsup, which, it has been stated, may be made without the use of chemicals.

2. By the use of benzoate and benzoic acid, the flavor of the article preserved is not lost nor can any inferiority of the product be disguised.

3. The flavor produced by vinegar and spices is wholly artificial and does not retain much of the natural flavor of the product that is preserved. By this it is easy to cover up inferiority and thereby deceive the consumer.

4. Changed conditions in economics have made it imperative for the manufacturer to prepare his food to reach the consumer in a sweet, wholesome, and palatable state. Benzoate and benzoic acid for catsup do this far better and in a less injurious manner than the products that are now used and so extensively advertised in the manufacture of the pure-food catsup.

It will readily be seen why I chose this subject and gave it such a ludicrous title, "The New Pure-Food Catsup: Or, When Is a Chemical Not a Chemical?"

COLLECTION OF HOSPITAL FEES

Minnesota Hospitals to Be Put on Same Footing as Hotels

On the initiative of the Minneapolis Hospital Council a bill has been introduced into the legislature giving hospitals and sanatoriums the same protection now afforded hotels, boarding houses, and lodging houses against dishonest patrons. Section 8969 of the Minnesota code now gives the latter class of institutions a lien on the baggage or effects of patrons. The bill now pending simply amends the present law by adding the words "hospital or sanatorium" to the list of institutions thus protected.

Care of Mental Defectives in Ontario

An effort is being made to induce the Ontario provincial government to establish two industrial farm colonies for mental defectives, one for girls and one for boys, to accommodate in all about five hundred pupils. The Toronto City Council has consented to set apart land for the use of the colonies, and the board of education is willing to give $100 a year for each pupil sent by the board. The provincial government has been asked to contribute at least $50 a year for each pupil. It is not the intention to take in the colony feeble-minded boys and girls of all grades, but only those of the higher grades, who are at present the greatest menace to society. Nor is it intended that they shall remain permanently in the colony. After being trained for self-support, some, it is hoped, may go back into society; others, it would appear, when they are 21 years old, will be placed in the care of other agencies.

INDUSTRIAL WELFARE

PRACTICAL INDUSTRIAL SERVICE

* * *

Modern Welfare Work Avoids the Taint of Charity—A Factor in Efficiency

BY CLARIBEL G. HILL, Social Service Director, D. E. Sicher & Co., New York City.

The keynote of all industrial service or so-called welfare work is practicality. So far as service work is philanthropic it fails. The people with whom we are dealing are self-supporting and self-respecting and do not want charity. So far as its aim is uplift it fails. Oftentimes the uplifted is superior to the would-be uplifter in spite of the fact that opportunities for education and personal improvement have been less and obligations much heavier. Service work is a practical business outlay even if, like many other outlays, its value cannot be reckoned in dollars and cents. The manufacturer engages an expert machinist to repair his machinery. Why is it not just as necessary—even more necessary—to care for the human element? More and more we are realizing that we must treat the human element at least as well as the machinery. To obtain the largest output from a worker regardless of her future is no longer a business principle; the maxim of modern efficiency is the largest amount of work for the largest period with the least amount of wasted energy. To remove the round peg from the square hole and fit it into the round hole where there is no friction is now an essential part of modern efficiency.

A girl's place of business is her home for over one-third of her day; it needs to be clean, sanitary, well ventilated, well lighted, warm in winter, cool in summer, and properly protected against fire. Bodily comforts should be provided, such as clean, sanitary toilets, good drinking water, suitable dressing rooms and wash rooms.

Our service department was established July, 1913. As we have only one worker in our plant, she must be a graduate nurse as well as a social worker of executive ability. From observations made during the three years since the establishment of the service department, we would consider the most essential requisites for a service director to be the ability to see the other point of view or to put herself in another's place. She should be able to see the employer's and employee's point of view, and to reconcile these quickly and accurately. In starting the department our worker was given a month's time to visit other plants and pick out for her own use what she considered best in each, endeavoring to avoid the mistakes of others. During this month, space was set aside for a recreation hall, emergency hospital, school room and office of service director. The rent of this space is estimated to be about 6 percent of the rent of the entire plant.

The walls are done in a light tan, with a dado of a little darker shade; the ceilings are white; the woodwork of the office and emergency hospital is also white, while that of the school room and recreation hall is oak. The emergency hospital contains a small white iron bed, combination medicine cabinet and table, chiffonier for linens, service chair, folding steamer chair for extra use, and clothes hamper. The cost of this equipment was between $125 and $150, and, while it is very simple, we have found it quite adequate for 600 employees in a nonhazardous industry. The office is a very small place (too small), equipped with desk and filing cases. This equipment could probably be bought for less than $100. This room also contains the shelves for library books which are loaned by the New York Public Library. This arrangement is a mistake, as it overcrowds the office at library hours and gives the girls very little opportunity to select books. A separate room for this purpose where the girls would have opportunity to look over the books would be most advisable. The recreation hall is most simply furnished. There are reading tables and comfortable chairs; blue-cushioned seats around the pillars give the needed touch of color; pictures and flags form the decorations. A piano and phonograph furnish music for dancing at the noon hour.

Fig. 1. Emergency hospital, D. E. Sicher & Co., New York.

Games are also available and the leading magazines are on the reading tables. The dumbbells, wands, and punching-bag are also in this room, which is not a very satisfactory arrangement, on account of the noise. It would be much better to have a small reading-room and still another room for the gymnastic apparatus, but unfortunately our space is not large enough.

As this was an entirely new venture on the part of the firm, the service director tried to introduce as many "special services" as possible without incurring too heavy an expense. These at the beginning included library, vacations savings, umbrellas, dry stockings for rainy days, etc. The greater part of the summer was spent in becoming acquainted with the girls and the surroundings. Of course the nursing service made the first appeal, and it was through this that the friendly relations were established. In the fall the department made its debut at a luncheon given in the recreation hall to about fifty girls, the heads of departments and the representative girls from these departments. At this luncheon the number and kind of committees were decided upon. There were originally about twelve, but they have since been reduced to the following, which constitutes a much better working force. These are:

1. Suggestion committee, made up of employees representing each department and chosen by the department.

This committee constitutes the editorial staff of our monthly house organ, *Threads and Thoughts*. It meets with the firm once a month to consider all suggestions in the suggestion box. A prize of $2.50 is offered for each suggestion adopted.

2. General order committee, whose duty is to help with the cleanliness and sanitation of the factory.

3. Lunch committee, which helps with the supervision of the lunch counter.

4. Entertainment committee, whose purpose is to arrange our entertainments.

5. Fire brigade, the object of which is fire protection.

6. Inspection committee, for the purpose of a monthly inspection of the entire premises.

We consider the cooperation of committees of employees with the service director a very important feature of Service Work.

In the fall of that first year our lunch counter was installed at an estimated cost of $350 to $400. Unfortunately, we have not space enough for a lunch-room, but we

Fig. 2. Class room where employees of D. E. Sicher & Co. receive instruction in time paid for by their employers.

have a counter of the cafeteria type and individual trays are provided. The following is a list of the articles served at the lunch-counter:

Drinks: Coffee and tea, each 2 cents; tea without milk, 1 cent; milk, 3 cents.

Meats, etc. (each portion is about 2 ounces): Corned beef, 6 cents; ham, 7 cents; cheese and salami, each 5 cents; frankfurters, 2 for 5 cents; eggs, according to market prices.

Bread, three slices 1 cent; pie, one portion 3 cents; cake, one slice 1 cent; crackers; oranges and apples in season; ice cream, portion 3 cents.

In 1913 Mr. Dudley D. Sicher, being interested in the movement to eliminate illiteracy among factory employees, applied to the Board of Education for cooperation in organizing a class among the employees in his factory. In October a teacher was provided by the board and a class was formed under the direction of the principal of Public School 4. The class held sessions five days a week from nine to twelve in the forenoon, the time being divided into four periods of forty-five minutes each. The school year extended over about forty-two weeks.

The subjects taught are equivalent to the course in English provided for foreigners in the evening schools of New York City. The instructor devotes her efforts principally to teaching her pupils to understand, speak, read, and write the English language.

The total cost of this experiment to the firm, inclusive of space, light, heat, janitor's service, and loss of worker's time amounted to $672 for the entire school year; the cost to the Board of Education for instruction and materials used amounted to $560, making a total cost of $1,232 for the instruction of forty-two employees during a period of forty weeks.

The earning capacity of the girls attending the school increased steadily during the year, and, since wages are paid by the piece, this increase in earnings is a fair measure of increase in efficiency as workers.

Such elementary schooling as that given in the factory school is a condition of economic efficiency in any line of work. In order to determine as accurately as possible the immediate economic benefit derived from the simple instruction given in the school, a comparison of the average earnings per hour of ten girls enrolled in the class (illiterate at the beginning of the school) was made with the average earnings per hour of ten literate girls not enrolled. This comparison covered a period of thirty-two weeks preceding and sixteen weeks subsequent to the opening of the school. The average earnings per hour of the ten literate girls exceeded the average earnings per hour of the ten illiterate girls by 3.7 cents per hour during the thirty-two weeks preceding the opening of school. Each four weeks' period of school showed an increase in the earnings of the girls attending school, while the earnings of the other group remained practically stationary. During the last four-week period of the sixteen weeks of school the earnings of the literate girls exceeded the earnings of the girls attending school by only 0.9 cents per hour. If the average earnings during the thirty-two weeks preceding the opening of school be compared with the average earnings during the last four-week period, the increase in earnings for those attending school averages 2.7 cents per hour, which amounts to approximately $70 in a year. The profit to the employer is equally obvious. If these girls remain in the industry an average period of eight years, the aggregate increase in earnings for the ten girls amounts to $5,600. It is fair to assume that the employer's profit on the work represented by this increase in earnings is not less than 10 percent, or $560, which is over four-fifths of the total cost $672) of providing school for forty-two girls during a period of forty weeks. The cost to the employer for sixteen weeks' schooling for ten girls on this basis amounts to about $64, or less than one-eighth of the profit which he may reasonably expect to derive from the increase in efficiency of the workers. Even if a much smaller increase in efficiency be assumed, the factory school would still yield a high rate of profit. It is a paying investment. It pays the employer to cooperate with the school authorities in providing instruction for illiterate workers. We may also add that other benefits, such as the reduction of the liability to accident and the appeal to the workers' loyalty and good will, although these cannot be reckoned in dollars and cents, are nevertheless of even greater economic value to the employer. We do a great deal along educational lines in the way of lectures, musicals and classes and also by means of our monthly house organ, *Threads and Thoughts*, edited and published entirely by a committee of employees. A little folder giving a list of our forms of special service to employees is handed to each new employee.

In the foregoing I have endeavored to give a brief outline of our activities, their approximate cost and value to us. In conclusion I would say that probably the greatest

value of all of this work lies in the fact that it aids in the assimilation and Americanization of the population of foreign origin and brings these people into friendly relations with the better class of American workers.

INDUSTRIAL SERVICE IN TIRE FACTORY

* * *

Medical and Dental First Aid Furnished to Employees—Club Features for Their Benefit

BY R. E. LEE, Superintendent of Labor, Firestone Tire and Rubber Company, Akron, Ohio.

The Firestone Tire and Rubber Company employs over eleven thousand men. For the health, safety, and comfort of this large force, the company has organized a medical department, a dental department, an industrial service department, and a safety department.

The medical department of this company consists of a chief surgeon and four full-time factory physicians and a first-aid hospital with six graduate nurses. All applicants for employment are required to pass a physical examination prior to being accepted for employment and it is our plan to reexamine them about once a year thereafter. An applicant who is unable to pass the examination is advised as to the proper course to follow in eliminating physical defects, and if he complies with these suggestions we are always willing to give him employment immediately thereafter. The medical department also renders temporary aid

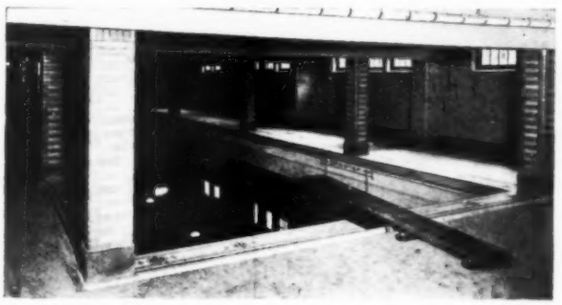


Fig. 1. Swimming pool in club house.

to men taken ill during working hours. We make no attempt to follow up this first aid by requiring or suggesting that the patients have the factory doctors continue treatment. In all such cases they are referred to their family physicians. Our hospital is used mostly for first-aid work, serious injuries being taken care of at our city hospitals. We are now building a new hospital where we will install a ward room with a number of beds so that emergency cases can be handled and given more direct attention by the medical staff. The company insists on employees reporting to the hospital for examination for the most trivial injuries, and we have prevented many minor injuries from proving serious by so doing.

We also have a dental clinic with two full-time dentists. Applicants for employment have their teeth examined by the dental department before being approved for work. The same method is followed as in the medical department with those whom it may be advisable to reject; they are advised to have their teeth put in proper shape and then apply for employment. The dental department renders first aid and also does light work such as cleaning of teeth, treatment of the gums and fillings, no attempt being made to do the heavier type of work such as bridge and crown work. No charge is made to employees for the services of the dental department. We have found that this department has been of decided advantage to the employees and the company, frequently preventing unbalanced conditions in the factory by obviating the necessity of employees leaving their work to obtain the necessary treatment.

Our industrial department, which is operated somewhat along the lines of welfare work, follows up absentees from work for the purpose of maintaining stability, eliminating undesirables and being able to promptly render assistance when emergencies require it.

Our safety department looks after the installation and

Fig. 2. Factory restaurant in club house for employees of Firestone Tire and Rubber Company.

maintenance of the usual safeguards for the prevention of accidents and the prevention of fires.

We also have, directly opposite the factory, a club house in which are bowling alleys, a modern swimming pool (Fig. 1) with shower baths, etc. The first floor of this building is devoted entirely to a dining room for factory employees (Fig. 2), the second floor to a dining room for office employees, and the third floor contains an auditorium and club room. The club building is 125 by 150 feet.

Gas-Poisoned Garment Workers

"Are garment workers, particularly pressers and ironers, subject to chronic poisoning by carbon monoxid gas, a poisonous constituent of illuminating gas, which may be discharged into the air of workshops by gas-heated appliances?" The U. S. Public Health Service, in a bulletin which has just been issued, answers this question in the affirmative. In 11.8 percent of the shops examined in a study of the hygienic conditions surrounding the cloak-and-suit and dress-and-waist industries in New York city the amount of carbon monoxid was excessive. In 38 percent of the establishments studied the odor of gas was perceptible. Fifty percent of the shops used ordinary gas irons only; 41.8 percent used irons heated by means of a mixture of gas and air under pressure. Only 2.4 percent used electric irons exclusively, and in 8.6 percent defective gas irons were found. The study of the gas tubes used showed that none were gas-tight and that most of them were in such a condition as to invite leakage. The constant breathing of carbon monoxid lowers the vital resistance of the body, thus paving the way for the infections of disease.

Doing nothing for others is the undoing of one's self. We must be purposely kind and generous, or we miss the best part of existence. The heart that goes out of itself gets large and full of joy. This is the great secret of the inner life. We do ourselves the most good doing something for others.—Horace Mann.

BULLETIN OF THE AMERICAN HOSPITAL ASSOCIATION

Monthly Bulletin issued from the Executive Offices
44 Baxter Building, Philadelphia, Pa.
WILLIAM H. WALSH, M. D., Secretary.

Official Bulletin for April

COMMITTEE ANNOUNCEMENTS

The Committee on Preparedness.—This committee, which is of the greatest importance to the association and the country at this time, has been actively at work. For the information of all the hospitals in the country, Dr. Washburn, the chairman, sends the following extract from a letter received from Major General W. C. Gorgas, surgeon general of the U. S. Army:

"One other great service that your association can render this department is interesting the interns in the Medical Corps of the Army as a career. There are at this time 230 vacancies in the Medical Corps with about 100 qualified candidates. On July 1 there will be an additional 222 vacancies. The department desires to fill these vacancies during 1918. This can be done only through the cooperation of the profession, and through the aid of the American Hospital Association."

The committee on preparedness urges on members of the American Hospital Association the need to familiarize their trustees, the staffs of their hospitals, and particularly their interns and medical students with the opportunities and advantages offered by a career as an officer of the Medical Corps of the United States Army. Circulars of information will be sent from the office of the surgeon general to all hospitals represented by membership in the association.

Committee on Out-Patient Work.—A meeting of the committee on out-patient work of the association was held recently in Boston, all of the three members of the committee being present. Mr. Michael M. Davis, Jr., of the Boston Dispensary, chairman; Dr. R. B. Seem, of Johns Hopkins; and Mr. John A. Ransom, of the Central Free Dispensary, Rush Medical College, Chicago, are the members.

It is the desire of the committee to ascertain the chief problems which superintendents of dispensaries and out-patient departments are facing, the practical conduct of their institutions, and also to learn what interesting developments those concerned with the management of dispensaries see now under way or look to in the near future. With this in mind, the committee is writing to about 150 representatives of dispensaries and out-patient departments to ask their superintendents to indicate suggestions on the above lines. The dispensaries and out-patient departments of this country have been grouped into three classes, and each member of the committee has undertaken to communicate with a number of dispensaries in each class, namely: (1) the teaching out-patient departments of hospitals connected with medical schools; (2) the out-patient departments of hospitals that are not teaching hospitals; (3) dispensaries not connected with hospitals.

Committee on Hospital Standardization.—It will be remembered that this committee, of which Dr. Winford H. Smith is chairman, was named to act in an advisory capacity to an investigating committee of the American College of Surgeons.

Dr. Smith reports that thus far the activities of the committee have been as follows: One meeting has been called and the meeting was held in Cleveland, O., in conjunction with the director of the American College of Surgeons and a committee of the regents of the college. At that meeting the whole question of the proposed investigation of hospitals for purposes of standardization was discussed, also its scope, and a tentative outline of the organization and the plan of work was agreed upon. It was felt that one of the first things to be done was to obtain the best man available for the investigation. Several names were considered, but thus far nothing has been definitely determined.

EIGHTEENTH ANNUAL TRANSACTIONS

Those who do not receive copies of the transactions are requested to notify the secretary at once. It is expected that all copies will have been forwarded by April 25, but there may be a delay of a few days. Transactions will not be sent to those in arrears, so that if any member does not receive a copy, it will be well to look up this matter. It will also behoove members to make sure that their addresses on file in this office are correct. To avoid possible errors, please advise this office by postcard whenever changes occur.

RED CROSS BASE HOSPITALS

The American Red Cross is organizing as rapidly as possible base hospitals in all parts of the country in order that the United States may be prepared, if the exigency arises, to care for an unlimited number of sick and wounded soldiers. It is the usual practice to utilize an already existing hospital as a center on which may be built the personnel and equipment. Up to the present time there have been organized about thirty such hospitals, but not all are completely officered or equipped.

Approximately $25,000 is required to organize properly a regulation base hospital, and each community is expected to contribute the funds.

Base hospitals are organized in accordance with the regulation of the medical department of the U. S. Army and under the supervision of Col. Jefferson R. Kean, director general, Military Relief, American Red Cross.

Each hospital must provide for 500 beds and a personnel of 196, including 23 physicians, 2 dentists, and 2 laboratory assistants and 1 roentgen ray operator. The medical staff is divided into 1 medical director, 2 administrative officers, 1 quartermaster and 1 adjutant, 9 surgeons and 7 medical men. Included in the personnel are 1 chaplain, 50 nurses, 25 nurses' aids, 80 male employees and 15 civilian employees.

There are many cities in which base hospitals could and should be organized, and this office will be glad to furnish information or assistance to any hospital contemplating such organization.

REGARDING MEMBERSHIP

The officials of the association are exerting every effort to enroll those who are eligible to membership, and many letters have been sent out to prospects. It would be interesting to read some of the replies received. For instance, one hospital superintendent wrote: "I haven't time to attend the annual meetings." To this we reply, "Your inability to attend the conventions should not prevent you from giving your support financially. If others are ready and willing to give both time and money, you ought to be

willing to give money alone. You will find at the meetings and on the active committees some of the busiest men and women, and many of the most successful. If we could join in the great federation *all* of the hospital workers in America and Canada, there could be no progressive movement too great for the body to accomplish. We need the aid and cooperation of all who are eligible for membership, and it is selfish to assume that we have enough without *you*. Because other generous and public-spirited persons are willing to pull a load up hill is no reason why you should catch on and ride behind.

TRUSTEES MEETING

The April meeting of the board of trustees was held in Cleveland, Ohio. One session was held at 10 a. m. at the Hollenden Hotel, at which the routine business of the association was transacted, and an afternoon session was held with the local committee on arrangements for the purpose of discussing plans for the September convention. A more detailed report of this meeting will appear in the bulletin for May.

REGISTRATION BUREAU

We have had a number of inquiries for competent dietitians, but thus far the vacancies still exist because of our inability to find competent candidates. If any qualified dietitian who reads this announcement is interested, we should be pleased to receive an application stating qualifications and experience.

COMMERCIAL EXHIBIT

Floor plans have already been sent out to all concerns who responded to our first invitation, and at this writing it looks as though we shall have many more applicants than spaces. We are assuring all exhibitors that our members will give close attention to every display, and that they may depend upon at least one visit from every member. Please remember that these exhibits are educational and that even though you don't care to buy you are sure to learn something. Many members have expressed the opinion that the Bellevue-Stratford display alone was well worth the trip to Philadelphia. The commercial houses represented will assist us to make the convention a success, and all they ask in return is your careful inspection of their exhibits.

Meeting of Committee on Preparedness

A meeting of the committee on preparedness of the American Hospital Association was held in New York City, Saturday, April 7, 1917, at 10 a. m. Those present were Dr. Frederic A. Washburn, chairman; Capt. E. F. Leiper, U. S. N.; and Dr. W. G. Nealley, secretary.

The committee understands that the American Red Cross now has all the base hospitals which it desires. For this reason it was determined that no action on this subject was indicated. The committee has already notified the director general of military relief of the American Red Cross of its desire to cooperate in every way with that association.

The committee next took up for consideration the matter of the expansion of the hospitals of the country, and made the following recommendations:

(*a*) That the American Red Cross establish supply depots on which the hospitals may draw in emergencies, either military or civil, if called on to expand. The committee makes this recommendation in the interest of economy and efficiency and to avoid the duplication of reserve medical supplies by hospitals and other associations. If the Red Cross desires any assistance from the committee it is at its service.

(*b*) That the hospitals of the association immediately make a survey in detail of their facilities for the accommodation of patients, and how they may expand, the survey to include:

1. Alteration or extension of buildings.
2. Location of additional beds.
3. How all necessary supplies may be provided promptly in case Red Cross depots are not available.
4. How to secure additional personnel.

(*c*) That circular letters like those appended be sent to members of the staff and physicians and nurses of the community.

(*d*) That hospitals which have not already done so train nurse aids under the auspices of the Red Cross and have a list of these women available. The committee urges all hospitals to fill out immediately and return the inventory forms sent out by the Council of National Defense. The committee endorses and urges on the hospitals of the association the recommendations of the surgeon general of the army, with regard to interesting the interns in the Medical Corps of the Army as a career.

It was resolved that copies of these proceedings be submitted to the president of the American Hospital Association for his approval and be sent to the headquarters of the American Red Cross and to the secretary of the American Hospital Association for publication.

CIRCULAR LETTERS RECOMMENDED TO BE SENT TO STAFF MEMBERS AND OTHER PHYSICIANS, AND NURSES

Dear Doctor:

A considerable number of the staff of the hospital are members of the ——— Hospital Red Cross Hospital Unit, or belong to the Medical Reserve Corps or Officers' Reserve Corps of the Army or Navy. Should these men be called away for active military service, there is the probability of a shortage in the working staff of the hospital, especially as it may be necessary in an emergency to increase the number of beds in the hospital. I am therefore writing to ask you to answer the following questions:

Would you, if the emergency arises, be willing to take a temporary appointment at the hospital?

If so, could you give regularly from two to three hours' time each forenoon?

Please indicate by numbers the department you would be willing to serve in, in the order of your preference.

Medical
Surgical
Orthopedic
Genito-Urinary
Neurological
Throat
Children's Medical
Syphilitic Department
Dermatological

Very truly yours,

.....,
Superintendent.

Dear Doctor:

A considerable number of the staff of the hospital are members of the ——— Hospital Red Cross Base Hospital Unit, or belong to the Medical Reserve Corps or the Officers' Reserve Corps of the Army and Navy, or are in the National Guard. Should these men be called for active duty it is important to know who will be available for their regular and perhaps extra duty at the hospital. I shall therefore be very much obliged if you will answer the following questions, and return this letter to me:

Are you a member of the above organizations?

If not, would you be willing to do extra work in your own department?

Would you be willing to do work in departments other than the one to which you now belong?

If so, which ones?

Very truly yours,

.....,
Superintendent.

The whole world is aghast at the horrors of the European war with its murderous slaughter, but how much less horrifying is the loss of life from preventable sickness and accidents occurring in America?—Kansas State Board of Health.

HOSPITAL, MEDICAL, AND SPECIAL MEETINGS

JOINT ANNUAL CONVENTION OF AMERICAN NURSES' ASSOCIATIONS

* * *

The Three National Associations to Discuss Problems of Mutual Interest

The National League of Nursing Education, the American Nurses' Association, and the National Organization for Public Health Nursing are to hold a joint meeting in Philadelphia this year, April 26 to May 2, inclusive. The headquarters are at the Bellevue-Stratford Hotel, Broad and Walnut Streets.

Heretofore the associations have had concurrent sessions, and nearly all who attended have complained that they could neither be in three places at once nor afford to miss anything. Therefore, as an experiment, the joint program committee has taken literally its instructions to provide a joint meeting. The plan is to have subjects of mutual interest discussed at nearly every session, one paper being contributed by a member of each association. After many of these sessions, the meeting will break up into three separate round tables, one for each of the associations, at which the papers presented will be discussed from the points of view of these organizations. Among the subjects of sessions are:

Two Problems of Administration (duties of directors and methods of raising funds); papers by Miss Gertrude W. Peabody and Miss Ethel Rupert.

Some Practical Problems of Visiting Nurses in the Bedside Care of Patients; papers by Miss Rose Collins, Miss Hermina Stokes, and (in collaboration) Miss Edith Swaine, Miss Agnes M. Sjolund, and Miss Clara Johnson.

Some Modern Demands on the Graduate Nurse; papers by Dr. George Goler and others to be announced.

The Problem of the Small Hospital; papers by Miss Marie Brown, Miss Claribel Wheeler, and Miss Mary S. Gardner.

Health Insurance; papers by Mr. Miles Dawson and Miss Mary Beard.

Maternity Nursing; papers by Dr. Edward P. Davis and Miss Julia C. Lathrop.

Medical Social Service; papers by Miss Ruth Emerson and Mr. Howell Wright.

The Training and Status of Attendants; papers by Miss Edith M. Ambrose and others to be announced.

The Need of Endowments for the Promotion of Nursing Education; papers by Miss Mary Wheeler and another to be announced.

Health Centers; papers by Miss Elizabeth Ross and Dr. Robert H. Bishop.

The Relation of Clinical Records to Vital and Morbidity Statistics; papers by Dr. Louis Dublin, Dr. Hugh Auchincloss, and Miss Florence Wright.

Problems of Teaching; papers by Prof. Ambrose L. Suhrie and Anne Harvey Strong.

LEADERS IN WORK THERAPY FORM SOCIETY

* * *

Conference at Clifton Springs Leads to Organization of a National Society for the Promotion of Occupational Therapy

The conference held at Consolation House, Clifton Springs, N. Y., March 15-17, represented the first effort in the United States to organize the leaders of the work in occupational therapy and the reeducation of the sick and dependent. Those present were: Dr. W. R. Dunton, Jr., of the Sheppard and Enoch Pratt Hospital, Towson, Md., editor of the *Maryland Psychiatric Quarterly*, author of "Occupation Therapy"; Mrs. Eleanor Clarke Slagle, director of the Occupational Experiment Station of the Illinois Society of Mental Hygiene; Miss Susan C. Johnson, director of occupations on Blackwell's Island, late member of the Technical Division in the Philippine Islands; Miss Mabel G. Newton, secretary of Consolation House; T. B. Kidner, vocational secretary of the Canadian Military Hospitals Commission; and George Edward Barton, A. I. A., director of Consolation House, chairman of committee on occupations at the Papenvoort Model School in Belgium, author of "An Analysis of Conditions Influencing the Building of the Myron Stratton Home," and "Occupational Therapy."

Addresses were made by Dr. Dunton on "The History of Occupational Therapy"; by Mr. Barton on "The Therapeutic Value of Drawing and Modeling, and Preparation of Patients for Inoculation of Bacillus of Work"; by Mr. Kidner on "The Difficulties and Results of Reeducation of the Crippled Soldier in Canada"; by Mrs. Slagle on "The Work of the Occupational Experiment Station in Chicago"; by Miss Johnson on "The Occupational Work on Blackwell's Island." A paper was also presented by F. B. and L. M. Gilbreth on "A New Occupation for the Crippled Soldier—The Conservation of the World's Teeth," illustrated by photographs of a one-eyed, one-armed, partially deaf, legless man happily and profitably engaged in dental nursing.

The conference resulted in the formation of a National Society for the Promotion of Occupational Therapy, with the following officers: president and chairman of committee on research and efficiency, George Edward Barton, Consolation House, Clifton Springs, N. Y.; vice-president and chairman of committee on installations and advice, Mrs. Eleanor Clarke Slagle, Hotel Alexander, Chicago; secretary, Miss Isabel G. Newton, Consolation House, Clifton Springs, N. Y.; treasurer and chairman of committee on finance, publicity and publications, Dr. W. R. Dunton, Jr., Towson, Md.; chairman of committee on admissions and positions, Miss Susan E. Tracy, director of Experiment Station, Jamaica Plain, Mass. Mr. Kidner accepted the chairmanship of the international committee, with headquarters in Ottawa, whose duty it will be to keep this society in touch with those already existing or being formed abroad.

The following notable workers in occupational therapy were elected to honorary membership: Dr. Jules Amar, for France; Dr. Marcus Paterson, for England; Senator the Honorable Sir James A. Lougheed, K. C. M. G., for Canada; and Mr. Frank B. Gilbreth for the United States.

It is the purpose of the society to provide information and assistance to all who are desirous of teaching the work or who are interested in it. The common method of proposing and seconding an applicant for admission has been discarded, an interest in the work being almost the only requirement.

The dues, including the *Maryland Psychiatric Quar-*

terly, which will be the official journal of communication, are as follows: active members, $2; associate members, $1; sustaining members, $10. Applications for membership should be made directly to Miss Susan C. Johnson, care of the superintendent of the City Home, Blackwell's Island, New York.

Consideration was also given to the subject of offering advice and assistance to the Federal Government, for the introduction of reeducational treatment in the military hospitals in event of war.

From the personnel of the committee it would appear that the interests of the society are broad and include work among both the physically and the mentally handicapped. Efforts are being made to accumulate information relating to work among the tuberculous, crippled, insane, feeble-minded, cardiac cases, etc., as well as fatigue and efficiency studies, in order to give out such information to those who desire it. It is suggested that all who are interested communicate with the secretary, Miss Isabel G. Newton, Consolation House, Clifton Springs, N. Y.

PUBLIC HEALTH AND PUBLIC CHARITIES

* * *

Announcement of the Meeting of the National Conference of Charities and Correction

A realization of the importance of health seems to have spread through the program of the National Conference of Charities and Correction like an infection. The outline of discussions at the forty-fourth annual meeting of the organization, to be held at Pittsburgh, June 6 to 13, has just been issued from the permanent office at Chicago. The division on health will be under the chairmanship of Professor C. E. A. Winslow, of Yale University, and the vice-chairmanship of Dr. H. M. Bracken, secretary of the Minnesota State Board of Health.

The modern public health program will be featured by the chairman in his address. This idea seems to characterize also the discussions scheduled to occur at four other meetings under his direction. "What the Social Worker Has Done for Public Health" will be the topic of Homer Folks, of New York, a former president of the National Conference.

The campaign against infant mortality will be brought to the attention of the conference by Miss Julia C. Lathrop, head of the Federal Children's Bureau, and Dr. Charles E. Terry, late health officer of Jacksonville, Fla. Prof. Graham Lusk of Cornell University Medical College will speak on hygiene and economy in diet. Coordination of health activities appears prominently in the program outline. Three phases will be presented, respectively, by Franz Schneider, Jr., Gertrude Seymour of New York, and Wilbur C. Phillips of Washington; the apportionment of the health budget, the relation between social workers and public officials and the health center plan. Another session will be devoted to public health nursing.

"The United States is the only great industrial nation without compulsory health insurance," Professor Irving Fisher has said recently. In view of this need, the National Conference has provided an entire division on the subject of social insurance for its meetings at Pittsburgh. The chairman of this series of discussions is Max Senior, of Cincinnati. The program has been arranged to occur the latter part of the conference period so as to accommodate medical men who attend the meeting of the American Medical Association in New York.

The section on mental hygiene will convene under the chairmanship of Dr. Owen Copp of Philadelphia. His speakers include Dr. Stuart Paton of Princeton, Dr. E. E. Southard and Dr. Harry C. Solomon of Boston, Dr. C. Macfie Campbell of Johns Hopkins University, Dr. A. J. Rosanoff of New York, and Dr. E. Bosworth McCready of Pittsburgh.

In other divisions of this extensive program there will occur discussions of illegitimacy, of diagnosis of crime, of state aid to dependent mothers and of negro migration to northern cities. There will be separate meetings of groups interested in hospital social service, in social hygiene, and in antituberculosis work. It is likely also that a special housing institute will be held.

The conference at Pittsburgh will continue for one week. Thirty-five hundred delegates are expected to attend. The president is Frederic Almy, secretary of the Charity Organization Society of Buffalo. The prevention of human distress through the operation of all sorts of agencies has been adopted as the main topic of the meeting.

CHILD LABOR AND THE WAR

* * *

Child Labor Conference at Baltimore Urges Standards for Child Protection Be Maintained

The Thirteenth National Conference on Child Labor closed its sessions at Baltimore with conviction firmly established that, whatever war measures this country is obliged to adopt, there should be no let-down in the standards for child protection. Time and again this note was struck as Julia C. Lathrop, Dr. Stephen S. Wise, Dr. Felix Adler, and Owen R. Lovejoy pointed out the vital necessity of continuing all efforts to further our American democratic ideals, even if at the same time this country must take part in the fight for world-wide democracy. The lowering of standards abroad was used by Miss Lathrop and Mr. Lovejoy as an illustration of the facts that the excitement of war is fatal to the training and development of the younger generation and that social advance is retarded when childhood is impoverished. Dr. Felix Adler spoke of the fact that the tide of democracy is rising in Europe and that the people there will turn to us for help in the solution of their problems of free government. "In some respects we can confidently point to our example," said Dr. Adler, "but do we want Russia to adopt along with other institutions our system of child labor?"

The rest of the sessions were devoted largely to a discussion of the measures for which the federal child labor law has paved the way. Enforcing officials, Hon. John Price Jackson, of Pennsylvania, and Hon. Charles J. Fox, of Maryland, expressed their satisfaction that the federal law would reach some obstinate forms of child labor that the states had not been able to handle—the canneries of Maryland, for instance—and that the cooperation of state and federal enforcing officials would lead to a much more thorough enforcement of child labor laws. Miss Lathrop, after explaining the steps that had been taken for the administration of the law, said she believed the federal statute would greatly stimulate legislation in the states.

Forms of child labor that are to be found in every state in the Union and yet will not be touched by the federal law were discussed at some length. The use of children in the making of motion picture films was described by Miss Jeanie Minor of the New York Child Labor Committee as a form of child employment in need of nation-wide regulation. Following an investigation of the kind of work these children are called upon to do, New York passed a law forbidding their employment without a permit. As a result the producing companies are moving their studios

to New Jersey, where there is no regulation. At the session devoted to the agricultural problem, Mrs. G. H. Mathis, field agent and agricultural lecturer of the Alabama Bankers' Association, said the trouble in the South was that the farmers were so hopelessly poor they were obliged to use their children. The solution, she felt, lay in teaching these people how to run their farms so as to make them pay and then the children would be sent to school. Dr. Edward N. Clopper, of the National Child Labor Committee, spoke of the agricultural problem as the illusion of the near-so-near to us that we are unable to see it.

Other ways for making the world a better place for children were suggested by C. C. Carstens, of Boston, and Roy Smith Wallace, of Philadelphia, who advocated the codification of all child welfare laws in order to avoid the present confusion and duplication, and by Dr. John Dewey and Hon. P. P. Claxton, who emphasized the need of federal aid to elementary education as a means of equalizing the educational opportunities of children throughout the country.

OHIO HOSPITAL ASSOCIATION

* * *

Third Annual Convention to Be Held in Columbus—Interesting Program Promised

The Ohio Hospital Association will hold its third annual convention in Columbus, Memorial Hall and Hartman Hotel, May 22, 23 and 24, 1917. The tentative program includes papers on "State Resources and Needs for the Care of the Sick Who Cannot Be Properly Cared for in the General Hospital," by Dr. Robert G. Paterson, secretary the Ohio Public Health Federation; "The Place of the Individually Owned and Operated Hospital in the Community," by Dr. Ben McClellan, member State Medical Board, Xenia; "The Building of the Modern Hospital—From the Viewpoint of the Superintendent," by Mr. F. E. Chapman, superintendent Mount Sinai Hospital, Cleveland; "From the Viewpoint of the Architect," by Mr. C. F. Owsley, architect and designer of St. Elizabeth's Hospital, Youngstown, and others; "From the Viewpoint of the Visiting Staff," by Dr. Andrey Crotti, member medical staff, St. Frances Hospital; "From the Viewpoint of the Nurse Staff," by Miss Harriet L. Friend, chief nurse examiner, State Medical Board; "Care and Control of Hospital Linen," by Dr. A. R. Warner, superintendent Lakeside Hospital, Cleveland; "How to Meet Recent Increased Cost of Hospital Operation," by Mr. P. W. Behrens, superintendent the Toledo Hospital, Toledo; "Labor-Saving Devices in Hospitals," by Sister M. Genevieve, St. Elizabeth's Hospital, Youngstown; "Economy in Preparation and Saving of Food," by Miss Lulu Graves, dietitian Lakeside Hospital, Cleveland; "The Hospital's Responsibility for Giving Out Prompt and Reliable Information," by Mr. F. S. Bunn, superintendent Youngstown City Hospital, Youngstown; "The Importance and Need of State-Wide Hospital Organization," by Mr. Howell Wright, secretary Cleveland Hospital Council, Cleveland; "Qualifications Demanded of the Nurse as a Hospital Superintendent," by Miss M. A. Lawson, Akron City Hospital, Akron.

MEETING OF ALIENISTS AND NEUROLOGISTS

* * *

Program of Interest to Hospital Administrators—Outline of Topics to Be Discussed

The Annual Meeting of the Alienists and Neurologists will be held under the auspices of the Chicago Medical Society, Monday, July 9, to Thursday, July 12, 1917, in the Red Room of the Hotel LaSalle, Chicago. Dr. George A. Zeller will act as chairman.

The morning session, Tuesday, July 10, will be of particular interest to hospital people. The topics for that session are: state hospital architecture—exhibition of plans and photographs; state hospital custody—administrative problems; hospitals for cure, research, and prevention; colonies for the productive insane; therapeutic employment and reeducation. The topics for the other sessions are: Tuesday afternoon, general paralysis of the insane; Wednesday morning, manic depressive insanity and the minor psychoses, delirium tremens, and traumatic mental disturbances; Wednesday afternoon, legal aspects of insanity; Thursday morning, dementia precox; Thursday afternoon, epilepsy and the feeble-minded.

The program will be mailed June 28, with abstract of each paper. Contributors to the program are solicited. This is a society without a membership fee. Address Secretary Alienists and Neurologists, Room 1218, No. 30 North Michigan Ave., Chicago.

The Social Adjustment of the Unusual Child

The term "unusual" is here used to designate those children who cannot be classified as feeble-minded, yet whose social adjustment is abnormal. Knight, who is superintendent of the New England Home for Little Wanderers, says that some years ago he was impressed with the alarmingly large number of failures in dealing with children. He found that the methods used in dealing with unusual children were analytic, not synthetic. "Analysis alone without subsequent synthesis does not give a real diagnosis. In other words, having learned of intelligence, heredity, environment and all the rest, who is to assemble all this knowledge and tell us about the whole child? And then, inasmuch as our aim is to discharge children one hundred percent well in every department of the child's being, it is quite essential that someone should be responsible for unity of treatment. The task of synthesizing cannot safely be left with any one of a group of enthusiastic specialists working in fields often remote from each other." A plan has therefore been worked out for the study of unusual children by the laboratory method in the hands of a staff of pediatricians, psychiatrists, psychologists, trained social workers, graduate nurses, and trained attendants, all under one roof and one management. "A unified diagnosis is made of every child. . . . We have sufficient hospital space with modern equipment for the treatment and care of certain definite physical troubles, such as adenoids and tonsils, middle ear, certain functional and other heart troubles, scoliosis, enuresis, and especially underweight." The aim is, with this collective diagnosis in hand, to unify the findings and adjust the child "to society, to life in his home, in his neighborhood, in his community, and so on in ever-widening circles until fulness of satisfactory life in the world is reached." While an institution with all the staff and equipment under one roof and one management offers advantages for work of this character, Knight believes that such an institution is not absolutely necessary for the doing of work which is very well worth while. His discussion of the problem appears in a recent number of the *Albany Medical Annals*.

There's no work so tirin' as danglin' about, and starin', and not rightly knowin' what you're goin' to do next, and keepin' your face in smilin' order, like a grocer on market day.—George Eliot.

THE MODERN SANATORIUM

Conducted by ALBERT WARREN FERRIS, A.M., M.D.
Saratoga Springs, New York.

Please address items of news and inquiries regarding The Modern Sanatorium to the editor of this department, Saratoga Springs, New York.

Baths and Bathing

PAPER I.

BY ALBERT WARREN FERRIS, A. M., M. D., Saratoga Springs, N. Y.

No one goes to Paris without visiting the Latin Quarter, on the left bank of the Seine; and everybody who visits the famous students' realm familiarizes himself with the Boulevard St. Michel by day and by night. If he be fortunate enough to carry the proper letters of introduction, or be of the medical faculty, which fraternizes with the actor, the painter, and the writer, he may enjoy the rare pleasure of unreserved admission to the inner circles of the camaraderie of genius, whereby he will secure opportunities to attend unique gatherings and see some of the quaint and bizarre and altogether fascinating decorations and embellishments of the lodgings of the students, and learn from them of the best bits of architecture in the city.

The "Boule' Miche'" leads one to the Hôtel de Cluny, standing at its junction with the Boulevard St. Germain, near the Ecole de Médecine, a quaint, somber, and ancient structure erected in 1490, and used successively as a priory, a palace, and a museum—a remarkable example of late-Gothic architecture. One recalls many features of the interior of the Hôtel de Cluny, but none more distinctly than the remains of the *thermae*, or old Roman baths, originally erected about 300 A. D., in the ancient palace of the emperors, and enclosed by the walls of the Benedictine Abbey of Cluny in 1340.

The Romans knew a thing or two, including the facts that baths conduced to health, and that they were inseparable from luxury. A. C. Peale of the U. S. Geological Survey is authority for the statement that for several centuries the principal treatment of disease by the Roman practitioners was by means of the bath. Immersion in waters of various springs at various temperatures during the period of self-indulgence and luxurious living that preceded the fall of the "mistress of the world" was no new thing. Through the entire domestic history of the Romans are found allusions to the use of the bath. Certain of the Roman emperors, to gratify the people, erected *thermae*, consisting of baths, gymnasium, library, and sometimes a theater under one roof. Witness the constructions by Agrippa, Nero, and Titus. Public baths were constructed as early as 312 B. C. Apparently, as the glorious empire extended over conquered territory, no mineral springs were found that were not developed and equipped for enjoyment and remedial use. Ruins of ancient Roman baths appear in Africa, in Asia Minor, in France, in England. Since the ruined buildings were not restored by the conquerors who dismembered and appropriated the territory of Rome, one must infer that they and their people were not accustomed to bathing on any other than Saturday nights. Indeed, one learns that in the ninth and tenth centuries the knights of other countries whom we glorify and idealize were not refined and fastidious, but decidedly shocking as to table manners and care of the person. They profited not a whit by Roman example or Roman mythology. For legend and myth bore testimony to the delights of the bath for the preservation of health and charm, for refreshment after the heat of the chase, and as a vehicle for general sociability.

Was not the chaste Diana conserving the classicality of her contours and enhancing the brilliancy of her velvet skin by a hydrotherapeutic treatment in a shady pool in the forest, when prudence impelled her to set the dog on Actaeon? And surely it was Hesiod, that delightful gossip among the Greek historians, who whispers to us the details of the morganatic alliances of Zeus, and assures us that, in very truth, Aphrodite Anadyomene (the Roman Venus Cytherea) gracefully emerged from the foam that tipped the waves of the salt sea, as fully equipped for conquest with her voluptuous blandishments as her contemporary Athene, who sprung fully armed from the brain of Jove. The properties of saline waters thus attested have been proved empirically beyond peradventure by pure scientists, open-minded explorers, and doubting Thomases "many a time and oft" during the centuries of actual world-history that have elapsed since the misty ages of the legendary past.

Bathing in the river Nile is mentioned in very early historical records as a religious ceremony. Gay and festive were the Egyptians, fond of good cheer and of all the agencies of pleasure, including both rational enjoyments and the false and fleeting joy caused by intoxicants, with their corollary of the subsequent morning of contrition. But more evidence is obtainable concerning the use for bathing of the waters of the great stream of Northern India, the Ganges, the sacred river of the Hindus, issuing from an ice cave in the Himalayas and running a course of 1,500 miles to the Bay of Bengal. By the Hindu it was held in veneration as the cleanser from sins, and if one died and was interred on its banks, the entrance to Paradise. Two and half miles above sea-level and ten miles from its source stands the first temple on its margin, Gangotri, with its ghat, or flight of steps, passing down into the water for the convenience of the pious pilgrim bathers. Here and there along its course are temples, shrines, and ghats, the most important being those of holy Benares. No bathing pavilions ornament the delta of the river, where roves the man-eating koomiah crocodile, whose intimacy at the immersion ceremony is regarded as a detriment and unnecessary.

Persia early had such luxurious baths as to excite the wonder of its conqueror, Alexander the Great.

The Greeks, probably first the Athenians, enjoyed bathing and constructed baths; but to no such extent as the Romans. Homer tells us of the warm baths and massage enjoyed by athletes and warriors, after exercise and combat. And was it not the fair Nausicaa who directed that a warm bath be prepared for Odysseus, when the grim, relentless breakers of the ocean, at whose side the Phaeacian princess was playing hand-ball with her attendant maidens, hurled him up like a bit of kelp, exhausted and nearly speechless, on the Scherian beach at her feet? But the Greek who habitually employed warm baths was considered by public opinion exactly as effeminate as the sybarite who carried his cushion with him to the theater, whose seats were cold benches of stone—an object of de-

rision, even though the drama dragged its slow length along through several hours a day for three days. The best, as well as the many, to use the Greek terms, both men and women, commonly swam in the rivers or in the *piscinae*—the artificial pools—and used cool or cold baths in their private bath houses.

The Romans constructed establishments containing a dressing room, a room for oiling or anointing, a cool room (in which was the cool bath), a warm room, a hot room with a warm bath, and a sweat room, adopting from the Greeks the *laconicum*, or hot-air bath. The usual procedure seems to have been for the bather to sweat in the *tepidarium* with his clothes on, then to remove them and be anointed, then to pass on to the *calidarium*, or hot room, for further sweating. Next he entered a room where water, graduated from warm to cold, was showered over him from above his head, following which cooling process he was completely scraped with the strigil, and lastly masséed and anointed.

Restorations of excavated ancient Roman *thermae* and *balneae* give convincing evidence of the facilities for accurate, progressive application of temperatures, the completeness of equipment, and the variety of treatments, all taken as part of the luxury and delight which was completed by courts for hand-ball exercise, lounging rooms, conversation rooms for philosophers and their disciples, and for literati, and a stadium for games, with spectators' benches. Witness the accounts of the baths of Caracalla, of Diocletian, of Pompeii.

The ancient Roman bath régime described was designed partly for cleanliness, although no soap was available, oils and pomades or flour of lentils being used as a detergent, the strigil, or scraper, assisting greatly in the removal of accumulations.

In those days the curfew bell ringer would needs have been a stalwart person to have survived close muscular argument, had the curfew ordinance been instituted during the palmy days of "the eternal city"; but the people demanded and gladly heard the notes of the bells on the public bath houses, which were rung when hot baths were available for the day. As time went on, license crept into the public baths, originally instituted with strict separation of the sexes. They became disreputable, and hence were taboo by the early Christians. Certain supreme pontiffs of the Church of Rome had proclaimed that baths might be taken for cleanliness, but not for pleasure. But Pope Gregory, with refreshing good sense, declared bathing on Sunday not to be sinful.

[To be continued.]

A HEALTH EXAMINATION AT SCHOOL ENTRANCE

School Health Examination a Neglected Opportunity for Education of Parents and Teachers

The entrance on school life presents an opportunity for hygiene which has been strangely neglected, writes Dr. William H. Burnham in a recent number of the *Journal of the American Medical Association*. This opportunity, Dr. Burnham believes, has vast possibilities. It is not only an opportunity to determine whether the child is in condition to do school work and to have the child put into good physical condition, but also an opportunity to educate the parents and the teachers.

The teachers and the parents, as well as the school physician, should participate in the child's examination. This examination, Dr. Burnham says, should be in the nature of a conference of experts. The school physician should be not only a medical expert, but also an expert in school hygiene. The teacher, if professionally trained, is to some extent an expert in school work. The parents, having watched and trained their own children, are in a certain sense experts in regard to them.

The examination should include: (1) a test of physiologic age; (2) a test of psychologic age; (3) a test of the general health conditions; and (4) a history of the morbidity of the individual child. The consensus of opinion is that children should not attend school before the completion of the sixth year, and children who are imperfectly developed, weak, or diseased should be excused from entering school then. The determination of the child's mental development is as important as the determination of its physiologic ability to stand school work. This psychologic examination should not be narrowed down to pedagogic purposes; it should include observations of the child's spontaneous behavior on the playground and with playmates, and reports from the parents on the child's interest, ability to get on with other children, faults, virtues, knowledge, interests, etc. The health test should include condition of teeth, throat, nasopharynx, eyes, ears, etc. The morbidity history should record as far as possible all diseases that the child has had, and especially such diseases as rickets, scrofula or any form of tuberculosis, convulsions, measles, or any other "children's disease."

Better cooperation between the home and the school might be secured, Dr. Burnham points out, if such an examination as described were tactfully made by fairly intelligent school physicians and teachers with the aid of parents. The cooperation of the parents would be more readily secured if the school authorities, instead of taking the attitude of critics and outside experts, were to recognize the parents as interested and responsible parties. The examination would tend to educate parents because it would show that school work was not something to be taken up lightly and dropped again when something lucrative is offered to the children, but an important opportunity and privilege for which the child must present the credentials of health and some degree of mental and physical development. Such education of the parents would tend to make the work of the teacher, the medical inspector, and the school nurse easier, because the importance of the latter would be better understood. On the other hand, the plan "would tend to give teachers the right attitude toward the home and toward children. Teachers should always recognize the authority, the responsibility, and the general expert character of the parents in the education of their own children. The numerous exceptions to this can be treated all the better by one who recognizes this general truth. On the whole, perhaps we may say that parents are not much more inefficient than we teachers, and certainly we can learn from a child's parents in regard to the best method for his education."

Dr. Burnham's thoughtful and interesting paper has one fault: it contains so much information that it is likely to dismay a good many readers. Notwithstanding, it is well worth study by conscientious teachers and parents, as well as by school medical inspectors. Copies of the paper can be obtained on application to the Massachusetts Society for Mental Hygiene, 313 Ford Building, Boston, Mass.

That the gentle, kind mosquito is a most offensive bird and carries us malaria, some natives never heard. If you intimate such nonsense, they'll solemnly declare they get *their* chills and fever from miasm in the air.—Illinois Health News.

QUERIES AND ANSWERS

Morris Chairs for the Wards

To the Editor of THE MODERN HOSPITAL:

One of our best friends wishes to give us morris chairs for our wards because, as he says, the free patients as well as the rich ought to have comfortable chairs when they can be out of bed. But all these chairs that we know of have germ-catching seats and backs, and we are a little afraid of them. He laughingly suggested that he would be willing to leave the decision to THE MODERN HOSPITAL; please decide for us. A CANADIAN HOSPITAL.

The stuffing in the seats and backs of most morris chairs is curled hair, which is easily sterilized in any disinfector, if you have one; both these cushions are removable and can be covered with linen cases. It would seem that these two protections should make them quite safe. But if you want still further protection, why not buy the all-metal morris chairs, white enameled? The seat and back are in separate sheets of stamped metal, molded to fit the body most comfortably. They are quite as adjustable as those of wood, and can be cleaned with hot water and a cloth.

Interpreters for Hospital Patients

To the Editor of THE MODERN HOSPITAL:

In our free wards are many patients who cannot express themselves well in English, and some of them do not speak any of the common languages, such as French or German. Our doctors think some arrangement should be made for interpreters. What do other hospitals do about this? A MASSACHUSETTS HOSPITAL.

As your hospital is in a rather large city, there are probably consular representatives of nearly all nations there, and these will always be glad to send one of their office assistants to interpret for you. Most hospitals employ foreigners as domestics and the lower-paid labor. Many of these people speak languages and dialects other than their own. You should make a definite survey of your hospital people and make up a schedule of them to show the languages you have among your people. This schedule, kept in the main office, can be consulted by physicians, nurses, and patients, when interpretation is wanted. It is very important that patients be enabled to converse intelligently about themselves and in their own language.

Individual Gifts of Furnishings

To the Editor of THE MODERN HOSPITAL:

Do you think it wise and desirable to have individuals furnish private rooms in a new hospital according to their own taste and without respect to the general harmony of treatment in the furnishings of the hospital as a whole?

Several well-to-do people in our community are willing, even anxious, to do this; but we have rather feared the experiment. AN OHIO HOSPITAL.

We think it an excellent plan to have individuals furnish rooms for which they give the money; when they do so, you are nearly always sure of a permanent interest in the hospital on their part, and they pretty nearly always become permanent subscribers when the hospital needs money. But you must set a few inflexible rules; for instance, no upholstered furniture must be installed, no rugs that will not admit of cleaning and disinfecting, no plush or damasks, and no furniture too heavy to be easily moved. Grillwork and fancy patterns of carving cannot be admitted in bed-head or foot or in chairs or dresser facings. It seems to us that these details will be easily controlled, especially in these days when simplicity in patterns is "all the style."

Chemical Wall Stains

To the Editor of THE MODERN HOSPITAL:

Some of our walls are constantly changing color to a dirty, streaky yellow, no matter how many coats of paint or enamel we put on. The outside red brick facings are also showing something of the same streakiness of white. Our architect says it is the soda or lime coming through from the plaster and out of the brick itself. It is very ugly and annoying, and we wish very much that we could do something about it; can we cure it?

AN ILLINOIS HOSPITAL.

We have all had that trouble, and patience is the best cure. Don't let the streaks get on your nerves as well as on the walls. They are not an incurable disease as affecting the walls, but they are a loathsome and distressing ailment when they attack the nerves; moreover, they are dreadfully catching.

Seriously, there is not very much to be done just now; your building is probably less than three years old; presently all the obnoxious chemical material will have leached out of the brick and plaster, and then you can tidy up with some paint remover and new paint. A sandblast machine or a carborundum polish applied by hand from a scaffold will make your exterior like new.

The Laboratory in a Small Hospital

To the Editor of THE MODERN HOSPITAL:

Ours is a very small hospital, and is poorly financed, but it is filling a very great need in our community. We cannot afford a pathologist, and yet our doctors feel that we should have someone who can do urinalysis and the simpler laboratory technic, such as blood-counts, the Widal, etc. We agree with them, but what are we to do? Our doctors object to one of their own number doing this work for the others, on some part-time pay arrangement; they say that this one man is in competitive practice with them and this would give him too much information about their patients. The only other way we can think of is to give a short training to one of our best nurses and let her do this work. Would this be a practical solution?

A WESTERN HOSPITAL.

Your last proposal will not do at all; a nurse without medical training, or several years' training as technician in a good laboratory, under competent direction, would be worse than no pathologist at all, because her work would obscure rather than shed light on pathological conditions, and would mislead the doctors.

The way for you to do is to educate the medical men up to allowing the one qualified medical staff member to do your laboratory work, as you say, on some part-time pay basis. Specimens could be sent to the laboratory by numbers instead of by patients' names, and thus hide their identity, though this is a miserable subterfuge, and renders the work of the pathologist almost negligible in results. But it can be a beginning, and if the pathologist is the right sort he will soon have the other men coming to him with their problems of diagnosis. A further broadening of the pathological work so that the laboratory man can utilize the other facts in the case to help out in diagnosis and treatment should come gradually but rapidly. You must have a pretty narrow-minded set of medical men.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army.

Care and Asepsis in Hospitals for Infants. August Strauch, M. D. Arch. Pediat., 1916, XXXIII, No. 12.

While recognizing lack of individual care as a factor in the well-known ill effects of hospitalization on infants, Strauch attributes these ill effects mainly to cross infection through such means as the use in common of bath tubs, combs, powder boxes, ointments, and toys. The washing of several babies and the cleaning of their anal region on the same table, and the preparation of milk by the same nurse who attends to diapers and feces are mentioned as additional dangers. Mere ordinary cleanliness, Strauch says, is not sufficient; "asepsis that aims to approach the perfection of the surgical operating room is imperative." The complexity of these requirements of asepsis necessarily demands a much higher ratio of nurses to patients in the case of infants than in that of adults. Heubner demands from 3 to 5 nurses for 8 children; Biedert asks for 1 nurse and several servants for 2 or 3 babies; Baginski gives no more than 4 children at most to 1 nurse; Sollmann requires 20 nurses for 50 beds. This means that proper hospital care of infants must be expensive. Both for their own sakes and for the sake of reduction of expense, the little patients should be kept in the ward no longer than necessary. Strauch suggests the creation of open-air camps, cottages, and sanatoriums in the country or on the seacoast for convalescent or chronically ill children.

Prevention of the Transmission of Infectious Diseases in Hospitals (Die Verhütung der Ueberträgung ansteckender Krankheiten in den Spitälern). Dr. E. Feer. Corr.-Bl. f. Schweiz. Aerzte, Basel, 1916, XLVI, No. 43.

The author has studied the conditions with regard to infectious diseases in the hospitals of most of the great cities of Europe and especially in the Paris hospitals. The observations made in children's hospitals are most interesting. Fifty years ago the mortality from infection at the Hôpital des Enfants malades in Paris was so great that Archambault used to say: "At the children's hospital the patients do not die from the diseases they bring with them but from those they contract there." As a result of a report of the Medical Society of the Paris Hospital, isolation was carried out in all hospitals, and special isolation pavilions were established for diphtheria, measles, and scarlet fever in all children's hospitals. But even then the mortality from infection was great.

Isolation on a grand scale was established in 1900 in the new Pasteur Hospital, which receives only patients with infectious diseases. It comprises two pavilions with 24 isolated rooms, most of which contain only one bed each. The service is strictly antiseptic. In 10,000 cases treated during the first ten years at this hospital, only 30 cases of infection occurred. In other Paris Hospitals, where the various infectious diseases were isolated in special divisions, the number of cases of infection was ten times as great.

Lesage introduced in the Herold Hospital the system of closed glass boxes, ranged along the long sides of the wards. He believes that the germs are transmitted almost exclusively through the air. He keeps all doors closed and prevents any strong air currents. He, too, obtained excellent results and his system was adopted in Berlin, Breslau, and other places.

Still simpler is the method of isolation of Dr. Grancher at the Hôpital des Enfants malades. His glass boxes have no doors and are open below and above. Grancher believes that the transmission of disease takes place chiefly through indirect contact. He therefore surrounds the bed of suspected cases in the general ward on all sides with wire screens and the service is carried out strictly antiseptically. With this system Grancher obtained good results.

A similar bed-isolation system is used in England, with the difference that the screens are omitted. Among 669 patients treated in 1911 in the Fazakerly Hospital in Liverpool only two cases of infection occurred (scarlatina). But these splendid results are probably essentially due to the excellent qualities of the English nurses.

Considering all the advantages and disadvantages of the various systems, the author selected for the new observation hospital for children in Zurich (Switzerland) the system of the Pasteur Hospital in Paris as the most efficient method of isolation. The new hospital is a two-story building, 26 meters in length. The glass boxes are ranged on both floors along the south side. They have a glass door and are 2 meters wide and 4.5 meters long, so that in certain cases two beds may be placed in them. Strict antisepsis is observed, and physicians and nurses put on a fresh gown whenever they enter any of the boxes. During the first year not a single case of infection occurred.

Organization and Working of a Hospital for Contagious Diseases (Organisation et fonctionnement d'un hôpital de contagieux). Dr. M. Labbé, Ann. de méd., Paris, 1916, III, No. 4.

The author, who is a member of the French army medical service, shows how a hospital for contagious diseases may be successfully improvised in time of war. First, all the suitable buildings of the locality should be carefully examined. Hotels, villas, school buildings, barracks, etc., all have their special advantages and disadvantages. The various rooms should be carefully apportioned according to their fitness for the various purposes. The rooms for the general services are preferably placed on the first floor. The whole building should be thoroughly disinfected. In the sick-rooms only iron bedsteads should be used. Special rooms should be established for the disinfection of incoming patients as well as for the disinfection of accouterments, bed clothing, etc. For convalescents an open but isolated space should be provided where the patients can take exercise.

Observations on the Preventive Measures Against Cholera in a Military Isolation Hospital (Alcune osservazioni di profilassi anticolerica in un ospedale militare contumaciale). Dr. M. L. Della Vida. Ann. d'ig., Palermo, 1916, XXVI, No. 10.

As soon as cholera made its appearance in an epidemic form on the Italian eastern front, special observation

hospitals were established for sick and wounded soldiers. These hospitals act as filters, so to speak, between the army in the field and the Italian cities where the reserve hospitals are located. In fact, all soldiers, sick or wounded, who come from the infected zone and are sent back from the first-line hospitals because they cannot be cured in a short time are not carried back to the reserve hospitals, but have to pass at least six days in one of the observation hospitals. These six days correspond to the incubation period of cholera, and if a soldier is infected the disease will develop at the hospital. But cholera carriers will also be detected, as a thorough bacteriological examination of the feces of all patients who enter these hospitals is made. From October 1 to December 31, 19,968 patients passed through the hospital in which the author is employed. The bacteriological examination gave positive results in 344 cases. Among these were 279 cholera carriers. The mortality from cholera during the period mentioned was only nine. The longest term needed to render cholera carriers free from germs was twenty-three days. Of interest is the fact that in all cholera cases (patients or carriers) in which the elimination of the vibrio took more than fifteen days, the men had not been treated with the anticholera inoculation.

The Attitude of the Hospital Toward Venereal Diseases. C. K. Clarke, M. D. Public Health Jour., Jan., 1917, II, No. 2.

Dr. Clarke says that a few years ago, when he was superintendent of the Toronto Hospital for the Insane, he observed that an increasing number of admissions were cases of general paresis. A careful survey of the figures showed that 25 percent of the male patients admitted were syphilitic. A steady increase in venereal diseases was observable from the cases admitted to the general hospital service. Seventy-nine paretics, many having congenital syphilis, came under observation during a year in a small clinic for the feeble-minded. This led to the opening of a special clinic for venereal diseases and to the routine examination of the blood of every public-ward patient entering the hospital. More than 12 percent of the patients admitted to the public wards of Toronto General Hospital are syphilitic. Dr. Clarke commends a law of Western Australia, which went into effect in December, 1915, which provides, among other things, that persons suffering from venereal diseases must place themselves under treatment and remain under treatment until cured; that physicians report cases of venereal disease under treatment; that the names and addresses of patients who fail to continue treatment until cured be reported; that compulsory examination and treatment be given under certain conditions; that free treatment be given by subsidized hospitals or salaried medical practitioners; that quack "cures" be prohibited; that a certificate be given when the patient is cured, and that secrecy be preserved.

Syphilis in the State of Minnesota. H. G. Irvine, M. D. Journal-Lancet, 1917, XXXVII, No. 7.

In many institutional surveys the Wassermann reaction has been found, on an average, in 20 percent of the inmates. On this basis, Dr. Irvine concludes that $166,781 is spent each year for the support of the syphilitic insane in Minnesota. Yet the state does not furnish a single bed in a single institution for the diagnosis, detention, or treatment of an infectious case of syphilis. Nor is there any law on the statute books that permits the handling of syphilis as other infectious diseases are handled. For lack of appropriation, the state board of health is unable to furnish any laboratory service for diagnosis or any facilities for treatment, such as are furnished for typhoid, diphtheria, etc. So far as Dr. Irvine knows, there are no local ordinances which apply to syphilis in any of the cities of the state. The Minnesota City Hospital has no beds for syphilis, but occasionally, if exceptional necessity exists, admits a case. There are practically no beds available for infectious cases in private hospitals.

Thus Minnesota is spending over a hundred and fifty thousand dollars a year for the care of dependents produced by syphilis. Most of these syphilitic patients are general paretics—hopeless cases—and the money spent on them is a dead loss to the state. Yet practically nothing is done to prevent the development of these dreaded sequelae or to prevent the spread of the disease by curing patients in the infectious stage. "The state apparently," says Dr. Irvine, "can well afford to furnish residence for the hopeless syphilitic insane for a rather indefinite period, but cannot afford to furnish treatment for early cases, even though it cost no more than 25 or 30 percent of one year's expense for an institutional inmate."

What the State Is Doing for the Syphilitic at the State Infirmary at Tewksbury, Mass., Based on a Survey on Syphilis and Gonorrhea. Ora Mabelle Lewis. Boston Med. and Surg. Jour., 1917, CLXXVI, No. 11.

The laws of Massachusetts provide that every town and city in the commonwealth shall provide for the care of indigent persons suffering from syphilis or gonorrhea. Overseers of the poor sometimes provide for treatment at the out-patient department of some local hospital, and sometimes they choose, as the more economical plan, to send the patient to the Tewksbury State Infirmary. The infirmary refuses no patient who applies. Patients are given radical treatment with salvarsan until all lesions are healed or symptoms have disappeared, and are then discharged. There is no provision for insuring that patients shall seek treatment if the disease reappears after the patient's discharge. Miss Lewis, who is a social worker for the South Medical Clinic for Syphilis, Massachusetts General Hospital, and auxiliary visitor to the Tewksbury State Infirmary, believes that, in justice to both the patients and the state, subjects for treatment at the infirmary should be carefully selected. Out-patient relief, she believes, is in many cases preferable if attainable, particularly as a Massachusetts statute provides that "no out-patient department connected with any hospital supported in whole or in part by taxation may discriminate against the case of any patient suffering from syphilis or gonorrhea, unless a special ward is provided therefor."

The Brooklyn Hospital Dispensary, Genito-urinary Department. Social Hygiene, 1917, III, No. 2.

The genito-urinary department of the Brooklyn Hospital Dispensary has been reorganized by the formation of a syphilis division. The attendance has increased from 108 on January 1, 1916, to 369 on January 20, 1917. This increase has been obtained through continued effort on the part of the physicians treating the clinic patients and by means of continued follow-up work. A careful record of attendance is kept, and patients failing to report for treatment receive three follow-up notices, sent out one week apart, as first-class mail, in envelopes bear-

ing only the street number of the dispensary. From September 14, 1916, to January 20, 1917, 1,653 notices were sent out. This does not, of course, mean notices to 1,653 patients, because in some cases three or more notices were sent to one patient. Of the patients who received notices, 377 returned for further treatment.

The Bernese Institution for the Treatment of Alcoholics. Dr. Glaser. Corr.-Bl. f. Schweiz. Aerzte, Basel, 1916, XLVI, No. 41.

This institution has just published a small pamphlet commemorating the twenty-fifth anniversary of its existence. It was established through the noble efforts of Rev. Marthaler in Berne, who founded a society for this purpose. In 1891 a building on a farm near Berne was rented and the treatment commenced with ten patients. In less than three months ten more patients asked for admission. In 1898 the whole farm was bought for 100,000 francs ($20,000), the government of the canton of Berne contributing 40,000 francs. This was done in order to give the patients suitable work. At first the treatment lasted only six months, but it was soon extended to twelve. Experience showed that it takes at least a year to cure a heavy drinker. The average number of men treated is now about thirty. At first only voluntary patients were received, but during the last few years patients were also sent to the institution by the cantonal authorities by administrative order. The treatment consists in a regulated life, wholesome work, and especially moral influence. Of the 954 men treated so far, more than one-third were completely cured and now abstain entirely from drink. Of the other 600, the great majority were returned to their families as useful members of society though they are not total abstainers. Only a small number returned to their old habits and were lost. The institution keeps up a lively correspondence with the discharged patients.

St. Johns Hospital, 1816-1916. Centennial Volume. 278 pp., 8vo. Copenhagen, 1916.

This fine memorial volume was published by the St. Johns Hospital for the Insane at Copenhagen, founded in 1816. It consists of two parts. In the first part, Dr. Helweg gives a history of the institution from its modest beginnings to the present day. He mentions especially Dr. Henrik Seidelin, Dr. Harold Selmer, and Dr. Emanuel Steenberg, who, by their labor and devotion, made the institution what it is today. The second part contains a number of valuable articles by prominent Danish psychiatrists.

Hospitals and Sanitary Stations. Dr. G. Roux. Montpellier méd., 1916, XXXIX, No. 8.

The author proposes that the care of all tuberculous soldiers discharged from the army be turned over to the Ministry of the Interior. Hospitals should be established throughout France for this purpose. The hospitals could after the war serve as popular tuberculosis sanatoriums. Only wealthy patients, who can take care of themselves, should be excluded from these institutions.

Drumcondra Hospital: A Short History. Dr. E. M. Cosgrave. Dublin Jour. Med. Science, 1916, December.

This hospital was established in 1818, under the name of "Whitworth Fever Hospital," in the northeastern suburbs of Dublin. For many years the institution labored under financial difficulties, which became acute in 1849, when the hospital had to be closed. It was reopened in 1853, under the name of "Whitworth General Hospital." It received free patients and pay patients "at the weekly sum of 2 shillings." Patients of all religious denominations were admitted. In 1893 the name of the institution was again changed into Drumcondra Hospital, under which name it is now known. A series of donations by benevolent persons, among them the Countess of Pembroke, placed the hospital on a firm financial basis. The old buildings were modernized and new ones added; the interior of the hospital shows all the improvements of modern times as a heating plant, electric lights, etc.

A Medical Creation of General Gallieni. Dr. d'Anfreville de la Salle. Presse méd., Paris, 1916, No. 43.

Commenting on the death of the late General Gallieni, the author calls attention to the great services the general rendered France while he was governor of the French colony of Madagascar. Impressed by the great epidemics which decimated the native population, Gallieni founded a great number of hospitals in all the provinces of the colony. He established leper hospitals, lying-in hospitals, a bacteriological laboratory and a medical school for natives. The results of this far-sighted policy were soon apparent. Smallpox epidemics disappeared, malaria and leprosy decreased and the people became reconciled to their French masters. As the author says, a hospital rendered greater services than a battalion in pacifying the people.

Some Phases of Home Economics in Hospital Administration. Elizabeth Selden, R. N., B. S. Am. Jour. Nursing, 1917, XVII.

Those high-school graduates who are best equipped for entrance to a hospital training school for nurses, in Miss Selden's opinion, are usually those who have taken one or more courses in home economics. High-school graduates in the past have often been found deficient in many subjects required by the state board of registration, including chemistry, physics, biology, bacteriology, hygiene, dietetics, and cookery. As these are state requirements, the hospital is compelled to instruct probationers in these subjects before instruction in nursing begins. Miss Selden suggests that the high school might give a special home economics course preparatory to entrance to the hospital training school. This would leave the hospital training school free to give more thorough and more specialized training within its own field. A postgraduate-high school course in home economics would also be of value, Miss Selden believes, in bridging the gap between the high school and the training school, and thereby retaining the interest of girls who would otherwise be drawn away from hospital work before they became old enough to enter the training school.

It is a curious thing to observe how almost all patients lie with their faces turned to the light, exactly as plants always make their way towards the light; a patient will even complain that it gives him pain "lying on that side." "Then why do you lie on that side?" He does not know—but we do. It is because it is the side towards the window. . . . Walk through the wards of a hospital, remember the bedsides of private patients you have seen, and count how many sick you ever saw lying with their faces towards the wall.—Florence Nightingale, "Notes on Nursing."

BOOK REVIEWS

The American Year Book of Anesthesia and Analgesia. Edited by F. H. McMechan, M. D. Cloth, $4. Pp. 416, with illustrations. Surgery Publishing Company, New York, 1915.

This year-book was established as a medium for presenting current advances in the science and practice of anesthesia and analgesia. War conditions have prevented the list of contributors from being as international as it would otherwise have been; it now includes George A. Crile, Yandell Henderson, Willis Drew Gatch, James Tayloe Gwathmey, Ralph S. Lillie, Arthur E. Hertzler, and many others. The attempt has been made to afford a comprehensive view of the present status of a number of subjects.

Clinical Tuberculosis. By Francis Marion Pottenger, A. M., M. D., LL. D., medical director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, Cal., professor of diseases of the chest, College of Physicians and Surgeons, Medical Department, University of Southern California, Los Angeles, with a chapter on laboratory methods by Joseph Elbert Pottenger, A. B., M. D., assistant medical director and director of the laboratory, Pottenger Sanatorium. Cloth, $12. Two volumes, Vol. I, pp. 707, with 111 illustrations; Vol. II, pp. 713, with 66 illustrations. C. V. Mosby Company, St. Louis, 1917.

These two volumes practically cover the field of tuberculosis, and embody the observations of Dr. Pottenger covering a period of twenty years. The studies were made in large measure at his private sanatorium. Pathological problems are presented in a practical way and from the point of view of a clinician. Diagnosis is considered in its relationship to physiology and functional pathology. The author, as he states, has endeavored to explain the physiological basis of the more important measures employed in treatment in the hope that such an understanding will produce a more intelligent therapy than that practiced today. The work is essentially a series of monographs, presenting in a clear way the subjects under discussion, and will prove valuable as a work of reference.

The limitations of climate are noted in a chapter devoted to this subject (Vol. I). It is not recognized as the main factor in the treatment of tuberculosis. The author states that a "country which invites patients to be out of doors and which offers physical surroundings in the way of natural scenery and vegetation, which are pleasing to the physical sense, will undoubtedly improve the patient's chance of recovery." We are sure, however, that notwithstanding these advantages, Dr. Pottenger believes that no thoughtful physician will prescribe climate without due regard to the circumstances of the patient or stage of his disease. Failure to do this has in the past opened the door to many regrets that have harassed the minds of thousands of patients at a time when they most required repose.

Chapter 48 (Vol. II) reviews the sanatorium treatment of tuberculosis. The author speaks of the adaptability of the sanatorium to carrying out measures and methods which are recognized as having particular curative powers in tuberculosis, a place where the scientific application of such measures as air, rest and exercise, light, tuberculin, hydrotherapy, psychotherapy and other aids may be applied most advantageously. The relative merits of the sanatorium and home are discussed in detail. It is hardly possible that results of sanatorium treatments such as quoted by Dr. Pottenger from his own institution could be attained in a large municipal sanatorium. The rank and file of these patients applying for treatment represent moderately advanced and far advanced cases. These patients have ceased to be wage-earners on account of physical incapacity and absolute inability to care for themselves and their families; on account of long-continued illness they have finally become a charge upon their relatives and friends and the sanatorium is sought as a last resort.

The solution of the municipal tuberculosis problem is largely viewed from the economic and social standpoint. The sanatorium as a factor in actually curing the disease should not be considered. The sanatorium receives those cases from all the zones of infection, thereby preventing the spread of the disease and in this way eliminating the contact from the home and about the streets and public places. It is exceedingly doubtful if a record of "60 percent apparent cures in moderately advanced cases" could be obtained in a large municipal institution, or a "healing or arrest in about 40 percent of advanced cases," as quoted from the Pottenger institution.

Dr. Pottenger fails to credit the original observer of the so-called "Wheaton sign" with his work; the terms with which he refers to it might even be taken to imply that the discovery of these integumentary changes was due to himself. CLARENCE L. WHEATON.

Clinical Studies in the Relationship of Insanity to Crime. By Paul E. Bowers, M. S., M. D., physician in charge, Indiana Hospital for Insane Criminals, Michigan City, Ind. Pp. 104. Paper, $1.50, postpaid. Alexander Publishing Company, Michigan City, Ind., 1915.

"Every year," says Dr. Bowers in the preface to this monograph, "society is unjustly sending to prison hundreds of insane and feeble-minded persons who, in the course of their mental disturbances, have violated the penal law." The purpose of this book is to show the necessity of distinguishing between criminal acts committed by persons mentally responsible and those committed by the mentally irresponsible. Dr. Bowers makes the point that, while society must be protected from violent acts whether committed by sane or insane, it does not receive protection from insane and mentally defective persons sent to penal institutions for a definite term of years and released uncured at the expiration of their sentences. He gives, under the heads of epilepsy, dementia precox, general paresis, and various other forms of insanity and mental defect, illustrations of the relation between mental defect and legal offenses. Dr. Bowers is satisfied, "after careful observation and study," that 60 percent of the prisoners admitted to the Indiana State Prison are mentally defective. While he does not state by what means he arrived at this figure, he distributes the proportions under various classes as follows: insane, 12 percent; feeble-minded, 23 percent; epileptic, 8 percent. "This," he adds, "is an exceedingly low and conservative estimate."

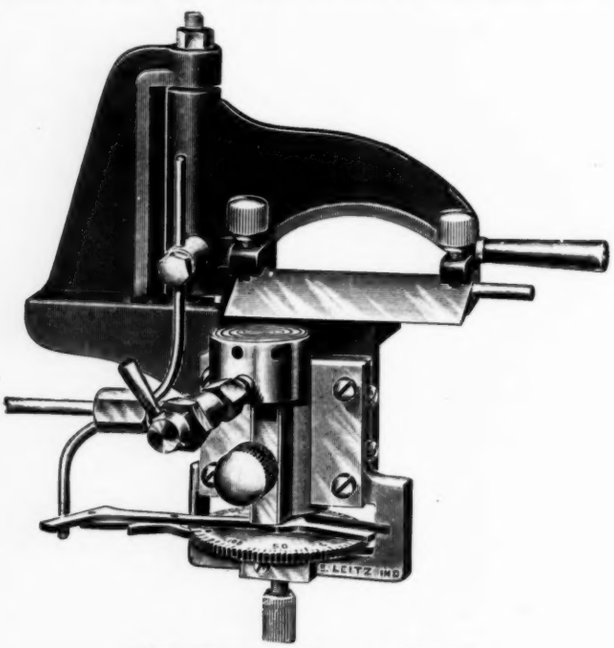
NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Automatic Feed Freezing Microtome

An improved type of automatic feed microtome, constructed according to suggestion given by Dr. Aschoff and made by E. Leitz, of Germany, had already become popular with laboratory workers in this country when the present disturbed condition abroad prevented further importation of this apparatus. The American branch of the above-mentioned firm in New York has now, however, succeeded in manufacturing this apparatus in this country, and is able to supply the demand.

Automatic feed of object is obtained in the following manner: a clamping lever is set to a scale in exact accordance with the thickness of section desired. A transmission rod acts upon a feeding gear, which engages the teeth of the wheel and raises the block corresponding to the thickness of section desired. One interval of the clamping lever equals one tooth on the feeding wheel, or 0.005 mm. = 5 micra. The object clamp for paraffine blocks will accommodate blocks up to the size of 30 by 22 mm. The freezing chamber for carbon dioxid is supplied with a needle valve, whereby the flow of carbon dioxid gas may be most accurately controlled. This chamber permits the freezing of an object of the size of 30 mm. in diameter. The apparatus is of rigid construction, and no lost motion or inaccuracy in adjustment has been noticeable in it after having been in use for several years.



Leitz automatic feed freezing microtome.

Vest-Pocket Hypodermic Sterilizing Outfit

Under the name of the Vim Alco (Alcohol), a unique and ingenious hypodermic sterilizing outfit is now being offered by the surgical supply houses.

As will be seen from the illustrations, a Vim-Lüer syringe is carried, suspended in alcohol, in a small glass bottle with a screw top. The piston of the syringe is hollow and contains a holder with two gold needles, also suspended in alcohol. Both syringe and needles, therefore, are always sterile and ready for immediate use in any emergency. Some physicians prefer to sterilize the syringe at home and substitute sterile water for the alcohol. A ground joint between a flange on the syringe and the mouth of the bottle prevents excessive evaporation.

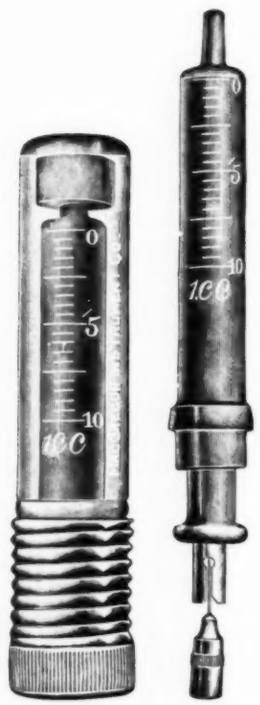


Fig. 1. The Vim syringe sterilizer.

The compactness of the outfit, its cleanliness and general practicability, will no doubt appeal to the exacting physician.

A Reliable Water Still

Since scientific laboratory work has become such an important factor in successful treatment of disease, reliable equipment for the use of the laboratory worker has become a prime necessity. One of the important items in such equipment is a good water still; therefore we wish to call the attention of our readers to the Acme water still. Although this is by no means a new piece of apparatus, it does not seem to have received the attention it deserves. We consider this an excellent device for the production of pure water by distillation, the distillate being cold and aerated if desired.

During the last few years materials of every kind have risen in price to such an extent that undesirable substitutes are being used in the manufacture of some of the

cheaper stills on the market. The Acme still, however, is of first-class workmanship throughout; it is made of copper and brass, tin-lined and nickel-plated.

The gas and water connections are extremely simple. The still runs automatically, and there is practically nothing to get out of order. The Acme is one of the fastest water stills known, as it produces a gallon of distilled water an hour, at the cost of only about 1 cent a gallon. The mineral and other matter that remains in the retort is drained off through the flushing outlet; this can be done

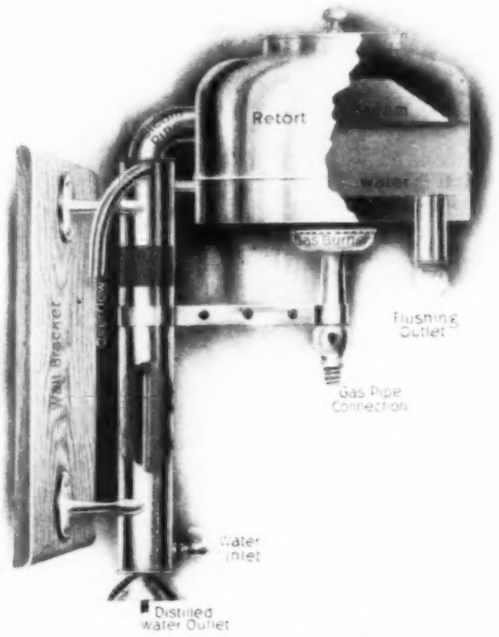


Fig. 1. The Acme water still.

in a moment's time without any trouble and without displacing the still or taking it to pieces.

The manufacturers furnish a special burner suitable for this apparatus, for use with either coal or water gas, natural gas, or acetylene.

The still can be purchased from all first-class laboratory and surgical supply houses.

Serviceable Sanitary Protective Sheeting

One of the items which calls for an outlay of a considerable sum of money in the course of a year, especially in a large hospital, is the supply of protective sheeting. As there are so many different "brands" of this material in the market, it must be difficult for the hospital superintendent to choose from among them, especially so as all of the manufacturers of these materials naturally point to their product as the best of its kind.

Fig. 1. Ostermoor sanitary sheeting.

During a period of over twenty years in the hospital supply business, I have come in contact with a great variety of different products of this kind, but of most of them I rarely heard again after a few months, or at least after a year or two, for the simple reason that these products did not stand the test of continuous service for a reasonable length of time. The really good protective materials that are on the market are only a few in number and among them I and many of my friends in the hospital field have found the Ostermoor Sanitary Sheeting one of the best of its kind.

The basis of this sheeting is a strong, closely woven, pliable cotton fabric; although light in weight, it is nevertheless strong and durable. The process of coating this

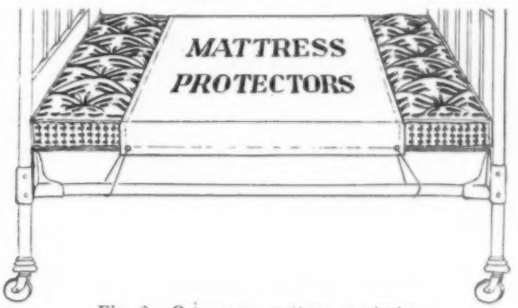


Fig. 2. Ostermoor mattress protector.

cloth with an original composition (entirely without rubber) makes the surface absolutely water-proof, urine-proof, and acid-proof. The sheeting can be readily washed and practically sterilized in boiling water, or one may use warm water and soapsuds.

The material is made both in white and maroon and either single or double coated; it can be secured at all first-class surgical supply houses.

Carrel Apparatus for Wound Sterilization by Means of "Dakin's" Solution

This instillation apparatus consists of the following parts: graduated glass container, tube with screw regulator, glass connections, and a set of five specially designed glass distributors with perforated rubber irrigating tubes attached. The tip of the container is closed with a rubber cork in which is inserted a so-called thistle.

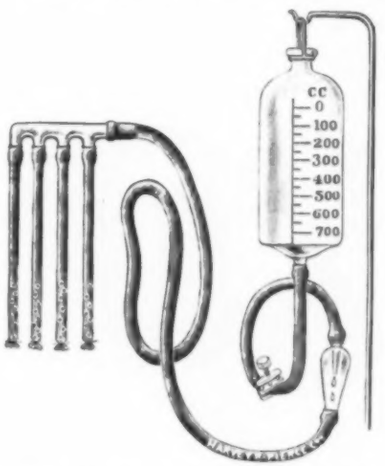


Fig. 1. Carrel apparatus for installation of Dakin's solution.

This thistle is filled with sterile cotton and serves the purpose of preventing the loss of chlorin.

The container is similar in shape to the well-known Kelly infusion bottle and is graduated to 700 c.c. It is pointed out by Dr. Carrel that this graduation is very essential in order to enable the surgeon or attendants to measure accurately the amount of solution injected.

The rubber tubing attached to the container should

be of a diameter of 1 cm., and the dropping chamber (which is similar to the Scott's saline dropper) should have an opening of 5 mm. in order to allow the proper amount of solution to pass to the distributors in a given time.

A screw regulator is inserted between the solution container and the dropping chamber. The glass distributor is attached to the end of the tube leading from the container, and, where more than one infected wound is to be treated on the same patient, two or more distributors

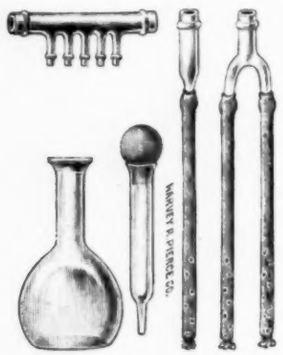


Fig. 2. Accessories for use in connection with Carrel technic of wound sterilization.

may be attached by means of multiple glass connecting tubes. These distributors are made with a number of outlets varying from one to five or six, the one to be used depending on the extent of the size of the wound to be treated. The rubber tubes attached to the glass distributors are from 15 to 25 cm. long, according to the location and depth of the infected area. The outside diameter of these rubber tubes is 5 mm., and the inner lumen should be 3 mm.

The distal ends of the irrigating tubes are closed by tying them with strong silk, and they are perforated at intervals of about 1 cm. with from six to twelve holes. The number of perforations as well as the number of irrigating tubes to be used depends entirely on the indications of each individual case.

Dr. Carrel and other surgeons who have had very gratifying results from the Dakin solution treatment state that it is absolutely necessary to follow closely certain rules which they have laid down after extended experiments and careful study, and the employment of a properly constructed apparatus is pointed out as an absolute necessity.

Nonleakable Trocar

DEVISED BY DR. C. E. KELLS, New Orleans.

The writer has often heard surgeons complaining that they have never been able to find a trocar that was satisfactory for the purpose of aspirating fluids from the abdominal cavity, or chest, etc. Recently, however, Dr. C. Edmond Kells, D. D. S., of New Orleans, La., demonstrated a trocar which he had devised several years ago and which has been in use successfully since then in a number of hospitals in New Orleans, and, as such an instrument is almost invariably used in hospital practice, he believes a description and illustration will be of interest to the readers of this journal.

As will be seen from the illustration, the instrument consists of a double, sliding telescopic sheath, with the end of the outer tube bell-shaped and the inner trocar sheath perforated at certain places. The trocar point itself is also drilled and braced to the end of a hollow tube, which also has an aperture. The trocar must be used in conjunction with a suction apparatus. This may be one of the well-known filter pumps and accessories, attached to the ordinary hydrant, but an electrically driven apparatus is preferable. There are a number of good devices on the market for this purpose, one of them invented by Dr. Kells, the Carmody suction, or the Beck-Mueller ether and suction apparatus, as well as a number of other types. Such a suction apparatus, in connection with other tips which may be easily attached, may be also used for emptying cavities in any part of the body or cleansing bleeding areas in any operative field.

Kells nonleakable trocar.

In order to use the trocar, the rubber tubing from the aspirating machine is connected to the outlet of the trocar and the pump started. Then, with the trocar withdrawn into the barrel, the end of the barrel is placed at the point to be punctured. The bell of the sheath is firmly pressed against the part to be punctured and the trocar blade pushed down as far as it will go. By holding the sheath firmly, the barrel can be pushed in any desired depth. The end of the trocar blade is then withdrawn to its full length and the contents of the sack are quickly emptied. Any leakage around the barrel of the trocar is at once sucked into the bell-shaped sheath and carried out with the rest of the fluid. Trocar blades or aspirating needles of any size or length may be furnished and are all interchangeable.

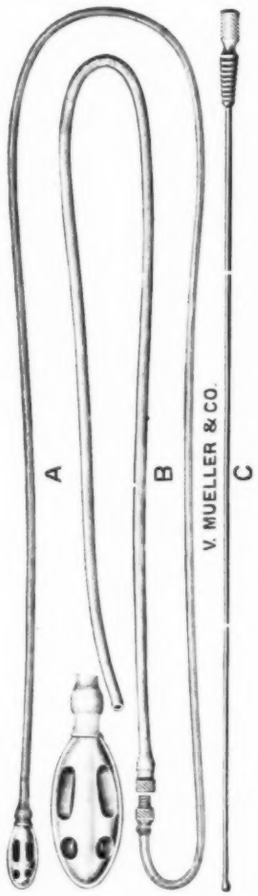
Stomach Lavage, Feeding, and Aspirating Tube

Stomach lavage, feeding, and aspirating tubes similar in appearance to the tube illustrated here have been devised by Drs. Einhorn and Rehfuss, but the important difference between the former and the tube shown herewith, which was devised by Dr. Allen B. Kanavel, Chicago, is that the active cooperation of the patient is necessary to introduce the former, while this tube can be inserted immediately into the stomach by the surgeon and left in position for days if it is found necessary.

The construction of the tube and its introducer are as follows: the bulb is of the same size as the Rehfuss bulb, except that the lumen of exit is larger and it is so constructed that it is impossible for the wire carrier to slip out. The rubber tubing is of the same size as the Rehfuss tube, but only 30 inches long; this is attached to a second, heavier tube 25 inches long by a screw lock. A carrier of piano wire, protected with probe point, is made to fit the first tube, so that it can be introduced without difficulty. The second tube is attached after the removal of the car-

rier, and the contents of the stomach are aspirated and siphoned off.

If the patient will swallow the tube, the lumen of exit of the bulb being larger than the Rehfuss tube, the stomach contents can be aspirated with greater freedom and the mucus interferes less. This latter is of importance in post-operative lavage, when the mucus is generally considerable, and interferes even with this tube at times. It will be seen that the bulb is so constructed that the point of the wire carrier cannot slip out of the bulb and injure the stomach. Owing to the shortening of the rubber tubing, there is less probability of the collapse of the tube on suction and there is less difficulty in removing the carrier. This latter procedure is also aided by having the patient throw his head back, thus lessening the sharp angle in the tube.



Kanavel stomach lavage, feeding, and aspirating tube.

Dr. Kanavel states that the tube described has proved of signal benefit in the vomiting of peritonitis or persistent vomiting from any cause, as well as being of great aid in the routine examination of stomach contents for diagnosis. In the former instance the tube is either introduced by the surgeon or swallowed by the patient. It is then attached to the chin by a piece of adhesive plaster and may be left in for days. In the regurgitation incident to peritonitis, the stomach contents are aspirated every half hour to an hour, and at regular intervals the stomach is washed out by injecting soda solution or other liquid through the tube and aspirating it. Between the washings the end of the rubber tube attached is placed in a basin, with the end covered by fluid, so that a continuous siphonage takes place. The retention of the tube is without discomfort, while the absence of stomach distention and vomiting gives the greatest relief to those distressed patients.

Fluid may be left in the stomach or medications given if desired. In addition to being used in peritonitis cases, this tube has been used in persistent vomiting from any cause, as paralytic ileus, gastritis, toxemic vomiting, etc. In such patients, after washing the stomach for a day or two, small amounts of liquid food are introduced, and, if subsequent suction shows that the food is being absorbed or is passing the pylorus, feeding is increased. Thus, without discomfort to the patient, food can be given at the earliest possible moment.

Smith Spotlight

Better illumination for operative purposes is always welcome in the operating-room, and many new types of lamps have been devised during recent years, all tending to produce better light.

The Smith light here illustrated is intended for the illumination of comparatively small surfaces. A bulb of 35 candle power with tungsten filament furnishes the light. The filament is of special design, which, together with the combination of lenses used, entirely does away with all shadows. A stream of white light of great intensity and traveling practically in parallel beams is thus produced. For work in deep cavities this lamp should be found most useful.

It is manufactured in a variety of mountings, so that it can be used with a floor stand, as a table lamp, or with a wall bracket, as desired. If preferred it can be attached to practically any floor stand which might be in use in the operating-room, thus making it a convenient lamp for those cases where it is of a special value without occupying any extra floor space. The fixtures are finished in nickel, oxidized copper, or gun metal.

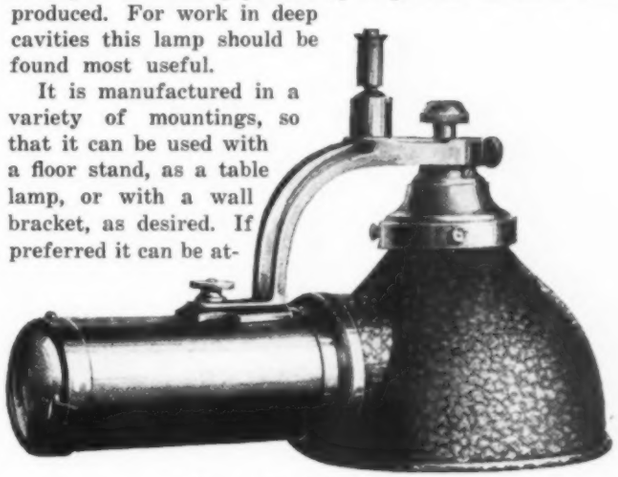
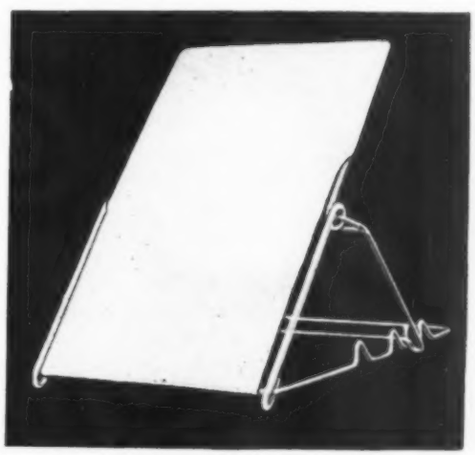


Fig. 1. The Smith spotlight.

Butler Sanitary Back Rest

The back rest illustrated here is an improvement in many ways over the well-known wooden back rest, as well as the heavy metal frame outfit with woven spring back.

The back support of this device forms a strong spring, and the canvas is so attached that all the applied weight acts directly on the spring. These facts, together with the flexibility of the metal itself, combine to give a solid degree of comfort.


Butler sanitary back rest.

The Butler back rest should practically be indestructible with ordinary usage. The frame is made of cold rolled steel and finished with black enamel. The rest can be placed in four different positions and folds to only 1½ inches in thickness; thus it will lie flat under the mattress when not in use. The cover is made of heavy canvas and is easily removable for washing.

THE BOYS' CLUB A PREVENTIVE PRESCRIPTION

Ways and Means of Teaching the Boys of Our City Streets to Keep Well, as Generally Adopted by the Boys' Clubs Throughout the Country

BY CHARLES G. KEITH,
Assistant Secretary of the Boys' Club Federation.

The surest, and perhaps the quickest, way of conserving the future health of our nation is by consistently and persistently training the rising generation to keep well. The schools are indeed doing much along this very line, but no one agency can hope to handle the problem in its entirety. Supplementing the work of and cooperating with the school is the organization known as the Boys' Club.

These clubs, located as a rule in the most populous sections of the community, deal almost wholly with that type of boy commonly known as the "street boy." A politer term, and certainly one which more fully describes this group of our wiggling wonders, is the "underprivileged boy." It will, no doubt, be surprising, and to many suggestive, to know that of the entire boy population of this country, 66 percent of it comes under this grouping. In round numbers this means over 5,000,000 boys.

The Boys' Club is the only preventive organization on the continent which considers this enormous class its special field of activity. It welcomes every boy, be he Protestant or Catholic, Jewish or of no faith, and, as for class distinctions or racial prejudices, they do not exist, making this organization unique in boys' work.

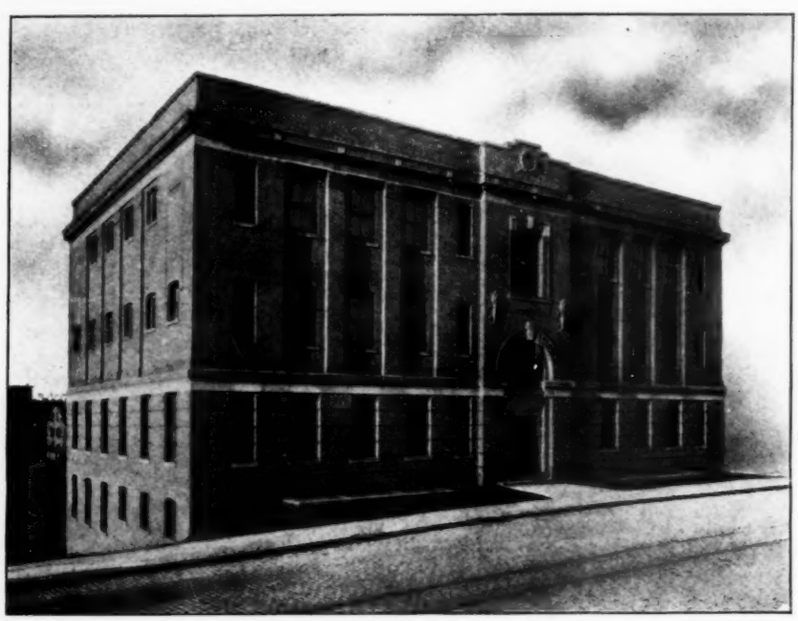


Fig. 1. Boys' Club, Springfield, Mass.

The need for such an organization is evident to anyone who is familiar with the home life of the boys of this class. It is all very well to prate about the fact that the proper place for a boy after dark is at home, but the truth of the matter is that tens and hundreds of thousands of our boys are not at home when they should be, and therein lies a tale.

When our little friend has finished supper, there comes to him a perfectly natural desire to do something; he does not care much what, but he wants to do something. There is nothing at home to attract him, so he wanders onto the street, where, to be brief, he becomes associated with the much-talked-about "gang," and eventually a participator in discussions and activities which tend to wreck and ruin his moral and physical well-being.

The Boys' Club, with its policy of the wide-open door, its bright lights, and the sounds of care-free fun and play, is far more appealing to the average boy than any experience he is apt to have with the corner gang. In the club there is an ever-present but unobtruded high moral standard set which cannot but have a vital influence on him in this most impressionable period of his life. Here, too, he finds as a rule a gymnasium, where he can work off all his accumulated surplus energy and, under competent guidance, lay the foundation of physical strength and muscular vigor that is so necessary to his future success. A thorough physical examination at his first appearance gives the one in charge the cue as to the needs of the individual boy. This is followed at regular intervals by further examinations, and the result is that many a boy is helped into a strength and physical well-being that he might never know were it not for the club.

Cleanliness in speech and action is, of course, a requisite to membership, but cleanliness in body is especially emphasized. It is surprising, and often amusing, to see the enthusiasm these boys show for the shower baths. One would think sometimes that a bath is a rare treat to many of these youngsters, and, indeed some experiences of club workers would tend to strengthen this belief. For example, one of the clubs was the recipient of severe condemnation on the part of certain parents not so very long ago because those in charge had aided and abetted the boys of these parents in cutting off their underclothes in order to take a bath, these same underclothes having been *sewed on for the winter.* Astonishing, is it not, and yet the entire lack of proper care of the body is quite the customary thing in these homes where the darkness of ignorance reigns supreme.

The teeth are frequently found in terrible condition, even in quite young boys, and the suffering that is in store for them is wellnigh unthinkable. Through the influence of the club this condition is remedied in many instances through trips to the dental clinic of the city. Not infrequently this results in the discovery of enlarged tonsils or adenoids, or both, and a date is then fixed for an operation.

Need it be suggested that cigaret smoking is predominant among this class of boys? And yet why does it continue to predominate? Clearly the many discussions, both in class room and in booklets, the anti-cigaret societies galore, the pleadings of fond parents—all are of little avail, and Young America, either in public or private, pursues his onward course, enveloped in a cloud of smoke and doomed to permanent inefficiency through sure and deadly acroleinization, as it were.

Far be it from me to claim a cure than which there is none other, but it has long seemed apparent that any remedy which did not take into consideration the psychological as well as the physiological aspects of the case was doomed to dark, dreary, and dismal failure. As long as a boy thinks he is "slipping something over" on his

would-be deliverers from the nicotine habit, just so long will he participate in its pleasures and evils. Make him believe, on the other hand, that to stop cigaret smoking takes grit and nerve and manhood, and is something that every boy cannot do, or really convince him that it is of supreme importance that he should stop, and you will find him putting up the fight of his life. Ranting against smoking has become a joke among the boys. To solve the problem, other methods of attack must be adopted. Take the following incident as an example of what is meant.

Fig. 2. Boys' Club, Troy, N. Y.

In one live club the usual diatribes had proven futile, and the officials determined to try a new line of procedure. It was decided to offer the silver nitrate cure in lieu of the much overworked good advice and technical information attack. Accordingly a notice on the bulletin board announced the opening of a registration for those who wished to take the cure. Special cards were printed, on which were questions giving the history of each case in great detail. The boys formed a line and were received alone in the "consulting room," where the facts were solemnly recorded just as given by the boys, despite the very evident vividness of imagination on the part of some of the youngsters. To allow thorough discussion of the new event among the boys, the first treatment was not to be given for a week. At the appointed time the club rooms were thronged and the excitement was intense. The office door opened, and out stepped two grave-faced men clad entirely in white. A few minutes of solemn parading and they led the way to the "operating room." That settled it—the cure was the biggest thing that had happened in a long time. Of course, there were scoffers in general and one in particular. He was "going to show this proposition up all right, all right; you wait and see." So boldly he told how many boxes of cigarets he consumed daily—about a dozen, if I remember rightly. Finally it came his turn to have his throat swabbed, and he nonchalantly stepped into the chair, the cynosure of all eyes. Then came the recessional and the exodus. Into a vacant lot they followed him—noble six hundred. Calmly he lit a cigaret while everyone held his breath. It was the crucial moment, and—well, you know the rest, or at least you should. Our hero, or was he the villain, demonstrated his superiority for a few moments, then precipitately rushed for the nearest fence, it being the only available support for him to lean over, while outraged nature took her certain revenge.

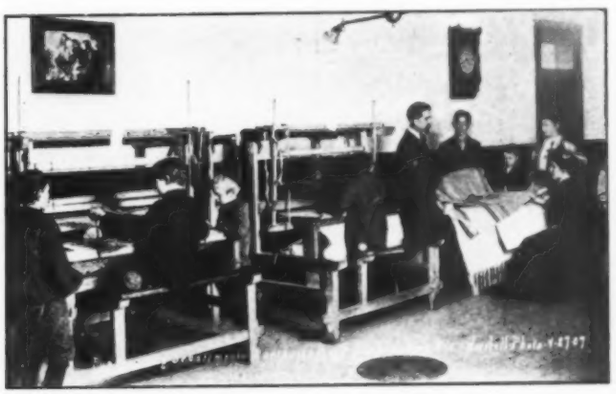


Fig. 3. Boys' Club. Rug weaving.

And so it goes. The Boys' Club is reaching vast numbers of boys from the very families where the question of health receives least consideration. It teaches these boys that success in life depends, first of all, on good health, and is showing them the way to gain this health. Furthermore, these boys carry this teaching into the homes with the most beneficial results, and ultimately the doctrine of cleanliness is made the basis of uncounted numbers of homes that come into being with the passing of the years. Thus by example and precept, by education and persistency, the Boys' Clubs have an important and in many ways unique place in the field of preventive medicine.

Fig. 4. Boys' Club. Printing class.

The Boys' Club Federation, with head offices in New York city, is the national organization of the Boys' Club movement. It aids in the formation and organization of Boys' Clubs in every community where, after an adequate

survey, it is determined that such a club is really needed. Men are furnished to conduct financial campaigns, either for buildings or budgets, and the federation is recognized throughout the length and breadth of the land as the clearing house for information concerning work with boys.

The work ahead is enormous. Thousands of clubs must be established to meet the needs of the country. A financial campaign and a campaign of education is already under way to bring this need to the attention of the people. Light is breaking in the East, and the dawn of a new tomorrow is at hand, a tomorrow in which work with boys—the underprivileged boys—is the keystone in the arch of all social service.

HOW THE UNITED STATES GOVERNMENT BUYS HOSPITAL SUPPLIES

Specifications Are Made From Critical Tests, and Standards Are Fixed Wherever Possible—Uniformity and Great Saving Result—Government's Work Should Be Great Help to Civil Hospitals

BY WALDON FAWCETT, Washington, D. C.

Two dominant objects have been in view in the evolution of the system whereby the United States Government buys hospital equipment and supplies. One object of this system, which has, by the way, but lately been perfected, is the promotion of the highest possible degree of economy through purchase under annual contract, with main deliveries twice each year, thereby making its practicable to handle most of the commodities in bulk. The second object has been standardization of all hospital utilities—especially those articles in the case of which there has been little or no attempt at standardization on the part of manufacturers.

To the management of the average public or private hospital, spending hundreds of dollars where the Federal Government spends thousands for hospital needs, it might appear that the disparity was such as to promise little profit from a study of governmental methods and purchasing machinery. As a matter of fact, however, there is probably not a hospital executive in the country, or a manufacturer or outfitter catering to hospital patronage, that will not gain some new ideas now and then by keeping in touch with Uncle Sam's policy and practice in this field.

As concrete evidence of the aid and inspiration that may be derived by an independent hospital from this source, there may be cited the opportunity vouchsafed to the every-day hospital man, whatever his location, to buy under Government specifications—not at Government prices, mind you, but in accordance with the requirements which Uncle Sam exacts in the case of staples and specialties for his hospitals. Nor will this privilege of looking over Uncle Sam's shoulder in making up a hospital shopping list be unappreciated by any person who has any conception of the time and money expended by Federal experts in tests and experiments preliminary to the drawing of these standard specifications, which are revised annually.

Until a half decade or so ago there was woful lack of uniformity and system in making governmental purchases —not only purchases for hospitals, but for all other Federal institutions as well. To bring order out of chaos, there was organized what is known as the General Supply Committee, a board of authorities on purchasing that is made up of one representative from each of the important Government departments, and included among whom is an official who has had wide experience in purchasing for hospitals. Thus almost all buying for governmental hospitals, large and small, and no matter where located, may be done, if desired, through one central "clearing house" in so far as prices, delivery conditions, etc., are concerned.

As a matter of fact, though, the General Supply Committee does no actual purchasing in the strict interpretation of the word. It paves the way, and leaves the actual buying to the bureaus and institutions that are in the position of ultimate consumers. It is, however, the preliminaries that count in this case, and these preliminaries are calculated to increase the store of knowledge of the outside hospital man quite as much as they enlighten the hospital executive on the Government payroll. Tests of hospital utilities are the very backbone of these preliminaries. The tests are conducted at the National Bureau of Standards, the great governmental research laboratories at Washington, one of the chief responsibilities of which is the trying out of wares of all kinds that have aroused the curiosity of the General Supply Committee.

To digress for a moment, it may be noted that this testing on behalf of the Government frequently leads the scientists of the National Bureau of Standards into lines of original research that ultimately benefit everybody concerned. For example, just now the bureau is conducting tests of wide range covering rubber goods, and, in an effort to be thorough, has gone so far as to install a rubber tubing machine that is expected to yield more satisfactory rubber tubing than has heretofore been obtainable. Last year the bureau made a beginning in the important work of testing commercial refrigerators, and made some most surprising disclosures. The testing of scales, the work in connection with clinical thermometers, and other activities might be cited to the same end.

Not only does the National Bureau of Standards constitute a "try-out" institution or proving ground for anything and everything that Uncle Sam purchases, but the scientists of the institution cooperate in an advisory capacity with the members of the General Supply Committee in preparing the standard specifications under which Government purchases are made—the selfsame specifications that in the case of hospital supplies and equipment may be adopted by any independent institution without so much as saying by your leave. The specifications are redrawn each year, and based on these specifications competitive bids are received from manufacturers who are willing to undertake to supply goods at a fixed price for the ensuing twelve months.

In buying hospital equipment and supplies under its supply schedule, the Government makes contracts which are more or less elastic in character. Such agreements, as a rule, obligate each merchant or manufacturer who has received an award to supply, at the agreed price, as many or as few of the articles on which he has figured as may be needed for the Federal institutions during the year. In some instances a minimum number is named, and in every case the prospective bidders may ascertain just how many of each specific article was used by the Government during the preceding year, so that they have some guide as to probable requirements in the future. At the same time there is, as has been explained, a certain amount of elasticity with respect to all contracts.

Given a supply schedule, which is, in effect, a huge mail order catalogue, a hospital official may order as his requirements dictate any time through the year, but in actual practice all hospital executives are urged to "stock up" twice a year—that is, order at the beginning of a six months' interval everything that will be needed, as closely as it can be anticipated, for the half year. Voluminous

as is Uncle Sam's shopping list in hospital outfitting lines, requisition officers are not held rigidly to its confines. If a hospital executive desires to purchase some article of equipment outside the Federal price list, he can usually obtain authority to do so, and it is understood that in time of emergency hospital officials have authority to purchase locally to meet immediate needs.

Hospital supplies, as listed by the General Supply Committee for the benefit of all Federal officials who have authority to order for hospitals, are comprised in several different classes. One class covers "laboratory apparatus, hospital appliances, and surgical instruments." Here we find several hundred "items," ranging all the way from safety pins to bedside stands or tables. Each item in turn is, as a rule, subdivided. For instance, the average type of bottle will be listed in all the standard sizes from one to sixteen ounces; bandages are subitemized in the various regulation lengths and widths; rubber gloves are scheduled under the names of the well-known makers, so that a purchaser can select his favorite brand; syringes are enumerated according to the distinctive types, etc.

Another class in the schedule, with hundreds of items listed, is that of "drugs and chemicals," but it is not merely from these sections of the catalogue, obviously arranged with a view to hospital needs, that the hospital executives order; they make selections from the category of "furniture and floor coverings," from "plumbing supplies," "window shades," and, finally, from "groceries and provisions." The officers, who exercise jurisdiction over the hospitals of the United States army and navy have requirements so special in character that the general supply schedule, comprehensive as are its 18,000 items, will not answer all requirements, and so the medical and surgical bureaus of the War Department and Navy Department respectively have prepared their own special schedules, following, however, the general plan already outlined.

Fig. 1. Headquarters of the United States General Supply Committee, which prepares specifications and awards contracts for hospital supplies for the public health service.

An interesting characteristic of the buying for Government hospitals is the increasing disposition to buy "on sample" rather than "on specifications," or, better yet, to buy on sample reinforced by standard specifications. The benefit to be derived from the use of basic specifications under such circumstances is that these specifications can be so drawn as to leave the business open to all comers instead of virtually giving a mortgage on the contract to the maker of one branded article. On the other hand, the use of samples simplifies the ordering of goods and at the same time affords an adequate means of seeing to it that quality is maintained, a sample from each consignment of contract goods being sent to the testing laboratories in order to make sure that it measures up to the original sample on which the contract was awarded.

Incidentally it may be noted that Uncle Sam seldom goes so far as to flatly refuse to accept hospital supplies that do not come up to contract. Perhaps the circumstance that often such goods are sorely needed at the time of delivery has something to do with it, but, whatever the explanation, it is the customary procedure, when a test shows goods to be defective, to accept them at a reduction commensurate with the lack of quality if the contractor is agreeable to such disposition of the matter. In a recent case involving a considerable quantity of textiles for hospital use the Government compromised by paying the supply house exactly what the goods had cost to produce.

Buying from sample enables the Federal hospital outfitters to "adopt" in certain lines the regular catalogues of supply houses of standing and reputation. This has been done in the case of makers of surgical instruments, sanatorium supplies, glassware, white steel porcelainware, etc. Where discounts are allowed for quantity, etc., the facts are duly noted on each catalogue filed. The extent to which the Government has thus indorsed the meritorious specialties of well-known hospital supply houses should dissipate any impression that Uncle Sam, because he buys under a system of competitive bids, always decides in favor of the cheapest offering. Not so very long ago, for example, the Government arranged to pay almost double the price previously paid for rubber sheeting in order to obtain a better quality.

It may surprise some readers to learn that the Government does not carry a large reserve stock of hospital supplies, nor is it the policy, in the face of unexpected and unusual conditions, to hastily buy up such supplies in sufficient quantity to tide over the situation. Given a situation such as has developed with respect to drugs since the outbreak of the European war, many practical hospital men would naturally expect Uncle Sam to rush into the market, and, with supposedly ample resources at his command, buy for requirements well into the future, even as the Government early in the war "cornered" the market on certain kinds of dry colors in order to insure a supply of ink for printing postage stamps and currency. No such ethics prevail, however, with respect to hospital supplies, and there are two reasons for this. One reason is that the appropriations made by Congress are close to current

demands, and that the funds are made available piecemeal, so to speak; in short, financial limitations prevent the Federal buyers for hospitals from anticipating requirements to the extent that is practicable in the case of far-sighted executives of independent hospitals having ample working capital. The other reason is a sentimental one—namely, a belief on the part of the Federal hospital men who have the say in this matter that it would be unbecoming the Government, in time of drug famine, to use its position to gain an advantage over other consumers who likewise sought supplies for humanitarian purposes. As a matter of fact, the Government has during the past year and a half relieved some hospital supply contractors from obligations which they could have met only at great sacrifice and the fulfillment of which was not absolutely essential to the needs of the Federal hospitals.

How the storage and distribution of hospital supplies is conducted under Federal auspices is perhaps best indicated by the system in use by the United States Public Health Service, which ranks, of course, as the leading outlet for hospital equipment and supplies in the Federal establishment. The Public Health Service furnishes supplies to about 125 "stations," of which number 22 are regular hospitals and the others are dispensaries, quarantine stations, etc. Of the $65,000 worth of hospital supplies required annually for this country-wide chain of institutions, about $60,000 worth is bought in accordance with the general supply schedule above referred to, and virtually all of these purchases are delivered to the pharmacist purveying depot of the service located at Washington, D. C.

Fig. 2. Scene at the laboratory, where preliminary tests are held in connection with the purchase of hospital supplies for the United States Government. Recording readings of clinical thermometers at the United States National Bureau of Standards.

The conduct of this purveying depot, an institution that is unique in many respects, might afford object lessons to many men who are concerned with the problems of the storage of supplies at hospitals. Some three thousand articles are regularly carried in stock at the depot, and the reserve stock usually inventories about $25,000. Despite the proportions of this surplus, however, every effort is made to turn it over frequently in order that fresh stock may always be available. That this is not difficult, though, may be surmised from the fact that last year 868 separate requisitions, many of them covering great numbers of items, were filled. Hospital executives all over the country are encouraged to place their orders at the semi-annual periods when the purveying depot stocks up, but, of course, special requisitions are honored at any time.

It is by no means the invariable procedure that hospital supplies bought for the Public Health Service must be sent to Washington, given place temporarily on the shelves of the purveying depot, and, when called for, dispatched to any destination where need exists. On the contrary, in order to eliminate lost motion, many shipments are made, without breaking bulk, from the manufacturer or supply contractor direct to the hospital where the goods are to be consumed. Last year such direct shipments totaled 255,000 pounds as against 185,000 pounds sent from the stock of the purveying depot.

The procedure to be followed in filling a requisition depends to a considerable extent on the urgency of the demand and also on the state of the reserve stock of the article called for. For instance, a few weeks ago the purveying depot received a hurry call from a United States hospital that was in immediate need of 5,000 yards of gauze. To fill the order almost cleaned out the stock at the depot, but the officials knew that a supply of 25,000 yards was due to reach the depot from the manufacturers within a few days, and so they took a chance in depleting their stock. Under normal conditions the hospital that made the emergency demand would have been asked to get along with 2,500 yards from the reserve stock until a further supply could be ordered from the contractor.

Fig. 3. Whirling machine at the National Bureau of Standards for testing registering device of clinical thermometers. Testing of hospital equipment and supplies is carried on primarily as a guide for the Federal officials who make hospital purchases.

Officials in charge of the storage of hospital supplies at the purveying depot at Washington, and likewise at the medical supply depots under the Navy Department and the War Department, all bear testimony to the convenience of handling supplies that are apportioned in standard units. Gauze, for instance, in 2,500-yard units is claimed

to make for ease in handling. That the Federal purchasing system, whatever else may be said of it, has served the purpose of economy is attested by the fact that carefully kept accounts covering the operations of three representative United States marine hospitals show that under the plan of competitive bids and orders under contract the supplies for these three institutions are today costing 35 percent less than was expended under the old system of outfitting.

For all that businesslike methods have been introduced to a liberal extent, there yet survive in Federal hospital outfitting a number of details that would probably be denounced as "red tape" by hospital men in other fields. For instance, in the navy and army hospitals surgical instruments and appliances that have become unfit for further use must be "surveyed and condemned" before others will be issued to replace them. A commendable effort is being made, however, to so arrange the purchase and distribution of medical stores and hospital supplies as to avoid congestion. In the navy, for instance, for all that there is adherence to the above described plan of semiannual requisitioning, it is planned that requisitions for hospitals shall be turned in on March 1 and September 1, for yards and naval stations on April 1 and October 1, and for receiving ships and ships in reserve on May 1 and November 1.

The present movement on the part of the national administration and Congress in behalf of military preparedness contemplates a considerable expansion of the activities in connection with the purchase of hospital supplies, and this extension has been made more immediately imperative by the operations in Mexico. Major-General William C. Gorgas, the surgeon-general of the United States army, stated a few days ago that, whereas the War Department has packed and ready for shipment medical and hospital supplies sufficient for 250,000 to 300,000 men, this supply, under war conditions, would not last more than five or six months, and consequently heavy emergency purchases would be necessary almost from the outset of war operations on a large scale.

LETTERS TO THE EDITOR

Hospitals and the Noise Nuisance

To the Editor of THE MODERN HOSPITAL:

It is high time that respectable citizens arouse themselves to make a vigorous protest against the continuous violation of the quiet zone ordinance intended to protect our sick in the hospitals of our large cities. It is almost impossible for the hospitals to enforce this ordinance unless they hire sufficient police to surround their property day and night. Chauffeurs, truck drivers, peddlers, roller skaters, drunken men and women at night—even the ordinary auto owner with cut-out open—take no heed of the quiet zone signs. Funeral processions make no effort whatever to avoid the hospital streets.

A particularly atrocious incident occurred recently in Chicago. In spite of quiet zone signs well lighted, about nine o'clock an auto procession of enthusiasts for one of our candidates for alderman went south on Hermitage Avenue, passing the Presbyterian Hospital, which contains about four hundred sick people. A brass band was sounding forth horrible blasts, while the crowd shouted, yelled and blew tin horns. As they passed the hospital a man in one car shouted up at the windows, "Are you all asleep up there?" and then they yelled again and blew horns. There were several very sick people within 75 feet of these yelling hyenas. One patient, as I write these lines, is in a dying condition, and no one can tell how much this demonstration contributed to hastening his death and to the very serious condition of some of the other patients.

Our hospitals are caring for the sick of Chicago, regardless of creed, color or social condition. We have no fight with politicians or political enthusiasts, but the sick in our hospitals demand from the citizens of Chicago the protection they deserve. Drastic measures should be taken to enforce the quiet zone ordinance. If this candidate sympathizes with the sick as he should, he will set the example by publicly condemning Saturday night's demonstration in the midst of our hospital district.

ASA S. BACON,
President Chicago Hospital Association.

Reports of Hospital Economies Desired

To the Editor of THE MODERN HOSPITAL:

I am to prepare a paper for the next meeting of the American Hospital Association on "Reliable and Practical Economies in Hospital Management." To aid me in gathering material for this paper would you kindly find place in your columns for the following:

Hospital superintendents who have found ways of cutting expenses in these times of high prices and are willing to share this knowledge with other institutions are invited to send their suggestions to the undersigned. The material will be used in preparation of a paper for the annual meeting of the American Hospital Association in Cleveland, next fall. Address all communications to

WALTER MORRITT,
Superintendent, Bethel Hospital, Colorado Springs, Colo.

Fumigation in Hospitals

To the Editor of THE MODERN HOSPITAL:

About a year ago I investigated the matter of fumigation a little for our purposes here at the Robert Packer Hospital, and I found there was a very great difference in the methods used in different hospitals. I believe a questionnaire addressed to the entire membership of the association would be of considerable assistance.

The following is the one I have drawn up:

1. Do you fumigate operating rooms after suppurative cases?
2. Do you fumigate private rooms after suppurative cases?
3. Do you fumigate rooms after death?
4. Do you fumigate rooms after
   (*a*) typhoid fever?
   (*b*) contagious diseases?
5. Do you carbolize or sterilize mattresses after
   (*a*) all pus cases?
   (*b*) contagious diseases?
   (*c*) death?
6. Do you fumigate clothing of ward patients on admission?
7. Just what technic do you follow in fumigation?

I shall appreciate it very much if I may have replies from the readers of THE MODERN HOSPITAL.

H. E. BISHOP,
Superintendent Robert Packer Hospital, Sayre, Pa.

"Good morning, Mrs. McCarty!" said Mrs. Ryan, as the friends met at the market. "How's all the folks getting along?"

"They be all doin' well," replied Mrs. McCarty, "except my old man. He's been enjoyin' poor health for some toime, but this mornin' he complained of feelin' better."—Kansas State Board of Health.

HINTS FOR HOSPITAL SUPERINTENDENTS.

Economy in Pencils and Penholders

While prices are soaring, the superintendent has to do a great deal of studying about ways to economize, and quite often he is likely to overlook the little things.

A lead pencil is a very small thing of itself, but your pencil bill for a year is quite an item. This is also true of penholders, which, after the end is disfigured or the paint rubbed off, are usually consigned to the wastebasket. This is, too often, the fate of the pencil stub. You will be surprised at the saving which can be made by insisting on your people returning old pencil stubs and penholders in exchange for new ones.

By using nickel stems or ferrules for splicing, pencil stubs can be utilized. The nickel tip that holds the eraser on the end of the pencil can be used in making brushes for library paste, stencil marking, etc. The bristles from a worn-out floor brush can be used for the brush, and a cast-off penholder makes the handle.

It is quite a saving to make your own library paste, which is very easy to make, according to the following formula:

8 oz. wheat flour.
¼ oz. alum (powdered).
1½ oz. glycerin.
1 dram oil of wintergreen.
1½ pints water.

Mix water, flour, and alum to a smooth paste, boil till it thickens (being careful not to burn or cook too much), take from fire, add oil and glycerin, and mix thoroughly.

ASA S. BACON,
Superintendent Presbyterian Hospital, Chicago, Ill.

Isolation Units

Almost every community wakes up occasionally to see under glaring headlines in its daily papers that one or more local hospitals have refused to accept desperately sick patients, who have died in the ambulance shortly afterward, on the road to some hospital that might be induced to take them; or, some local hospital has declined to accept a case of one of the diseases of childhood, such as diphtheria or scarlet fever, and in the hysterical attempt on the part of the family or the ambulance driver to find some place to deposit his unwanted burden, a good part of the community is "exposed" to the disease.

A hospital can be more grievously injured in the esteem of the public by even an apparent unwillingness on its part to accept a patient in extreme need than by any other one thing, and yet a good many hospital superintendents are quite callous to such criticism. If they but just stop to think that public opinion fixes the amounts of money given for charitable and philanthropic purposes, they would make a good deal more exertion than they do to influence public opinion favorably.

To our way of thinking, there is no excuse whatever—or ever—for a hospital's turning away a patient in extremity. There can always be made room for just one more, and the superintendent who has the best interests of his or her hospital at heart will try to make that room, and a little careful thought and a little ingenuity will almost always succeed in doubling up patients or in turning some room that is customarily used for other than patient purposes into an emergency sick room.

We are rapidly coming to the conclusion in this country, and that conclusion is being expressed more and more in public opinion, that a hospital is a place for sick people, and that an institution that cannot care for the sick, but that picks and chooses the kind or degree of sickness it will take, ought to be put out of business. A hospital that is known to accept and care for all who come seeking relief is the institution of all others in a community to which will be donated the necessary funds to carry on its work. The hospital in this country which has the largest endowment fund of any similar institution in the world, a fund generously and liberally, even lavishly, given to it, has this standing motto: "No sick person is ever refused admission." And in this connection we recall a little story of a fine old Irish gentleman, now gone to his fathers, who was once asked how he managed to feed and clothe his family of fourteen children, all of whom were born when he was a very poor man, working for daily wages. "Well," he said, "with every one that came, God seemed to send something along to take care of it."

The Hospital Inventory

Every once in a while some "efficiency expert" or a trustee who happens to be in business, proposes that the hospital take and keep inventories. Rarely does the proposer explain just what he means by a hospital inventory. At the end of the financial year very many commercial houses make inventories and use these as a part of their financial statement.

An inventory for a hospital is a vastly different thing. Just what are you to inventory of the hospital's assets? We can and should keep an inventory of furniture, linens, dishes, food supplies and hospital commodities in bulk, such as canned goods, janitor's supplies of soap and so on; but think of the amount of work and the unsatisfactory results of an attempt to inventory the surgical silk on hand, needles, gauze, miscellaneous rubber goods that are in use on the wards. Think of attempting to inventory the contents of the pharmacy! All these things can be inventoried, but there comes a time in hospital management when the expense in time and labor of doing a thing are not by any means compensated for in the results obtained.

Teaching in the Hospital

A hospital that does not teach is an extremely poor institution; there ought to be a teaching atmosphere in every hospital, large or small, special or general. The doctors teach each other and learn from their own experiences; the nurses are taught by the doctors, by the interns and by each other; the help downstairs are taught by those upstairs; the patients are taught by their doctors and by the nurses; and visitors who come to see the sick are taught by the hospital folks.

The teaching done in the hospital goes out into the community and becomes one of the most valuable assets. These teachings are expressed in the hygiene and sanitation in the homes of the people, in the purchase, preparation and consumption of foods. If an accurate calculation could be made of all the good that a good hospital does in a community, the care of the sick in its beds would be insignificantly small in the account.

Getting Ready for Summer

How about your window and door screens? Are they in good order and painted and ready to be put up the moment the first fly appears? If they are not, you are overlooking something.